code of federal regulations

Transportation

No. 3598

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Approved: Alfonso López Chaar
Secretary of State

By: Laura de Pombo
Assistant Secretary of State

49

PARTS 100 TO 177

Revised as of October 1, 1987

CONTAINING
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OF GENERAL APPLICABILITY
AND FUTURE EFFECT

AS OF October 1, 1987

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Cite this Code: CFR

To cite the regulations in this volume use title, part and section number. Thus, 49 CFR 101.1 *refers to Title 49, Part 101, section 1.*

Explanation

The Code of Federal Regulations is a codification of the general and permanent rules published in the Federal Register by the Executive departments and agencies of the Federal Government. The Code is divided into 50 titles which represent broad areas subject to Federal regulation. Each title is divided into chapters which usually bear the name of the issuing agency. Each chapter is further subdivided into parts covering specific regulatory areas.

ISSUE DATES

Each volume of the Code is revised at least once each calendar year and issued on a quarterly basis approximately as follows:

Title 1 through Title 16 ..... as of January 1
Title 17 through Title 27 ..... as of April 1
Title 28 through Title 41 ..... as of July 1
Title 42 through Title 50 ..... as of October 1

The appropriate revision date is printed on the cover of each volume.

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date certain for expiration, an appropriate note will be inserted following the text.

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The Paperwork Reduction Act of 1980 (Pub. L. 96-511) requires Federal agencies to display an OMB control number with their information collection request. Many agencies have begun publishing numerous OMB control numbers as amendments to existing regulations in the CFR. These OMB numbers are placed as close as possible to the applicable recordkeeping or reporting requirements.

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What is incorporation by reference? Incorporation by reference was established by statute and allows Federal agencies to meet the requirement to publish regulations in the Federal Register by referring to materials already published elsewhere. For an incorporation to be valid, the Director of the Federal Register must approve it. The legal effect of incorporation by reference is that the material is treated as if it were published in full in the Federal Register (5 U.S.C. 552(a)). This material, like any other properly issued regulation, has the force of law.

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(a) The incorporation will substantially reduce the volume of material published in the Federal Register.

(b) The matter incorporated is in fact available to the extent necessary to afford fairness and uniformity in the administrative process.

(c) The incorporating document is drafted and submitted for publication in accordance with 1 CFR Part 51.

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III). A list of CFR Titles, Chapters, and Parts and an alphabetical list of agencies publishing in the CFR are also included in this volume.

An index to the text of "Title 3—The President" is carried within that volume.

The Federal Register Index is issued monthly in cumulative form. This index is based on a consolidation of the "Contents" entries in the daily Federal Register.

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JOHN E. BYRNE,
Director,
Office of the Federal Register.

October 1, 1987.

THIS TITLE

Title 49—TRANSPORTATION is composed of seven volumes. The contents of these volumes represent all current regulations codified under this title of the CFR as of October 1, 1987.

The parts in these volumes are arranged in the following order: Parts 1-99, Subtitle A—Office of the Secretary of Transportation; Parts 100-177 and Parts 178-199, Chapter I—Research and Special Programs Administration (DOT); Parts 200-399, Chapter II—Federal Railroad Administration (DOT), and Chapter III—Federal Highway Administration (DOT); Parts 400-999, Chapter IV—Coast Guard (DOT), Chapter V—National Highway Traffic Safety Administration (DOT), Chapter VI—Urban Mass Transportation Administration (DOT), Chapter VII—National Railroad Passenger Corporation (AMTRAK), and Chapter VIII—National Transportation Safety Board; Parts 1000-1199, and Part 1200 to End, both Chapter X—Interstate Commerce Commission.

In the volume containing Parts 100-177, see § 172.101 for the Hazardous Materials Table. Parts 385-399 of this title contains the Federal Motor Carrier Safety Regulations, and a Subject Index to these regulations follows Chapter III. The Federal Motor Vehicle Safety Standards appear in Part 571.

For this volume, Laurice A. Clark was Chief Editor. The Code of Federal Regulations publication program is under the direction of Martha B. Girard, assisted by Robert E. Jordan.

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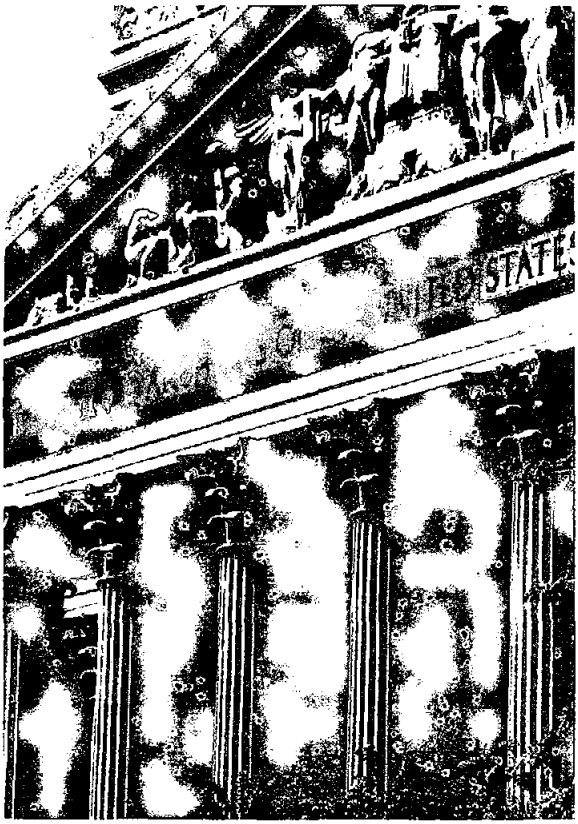

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Title 49—Transportation

(This book contains Parts 100 to 177)

Subtitle B—Other Regulations Relating to Transportation

CHAPTER I—RESEARCH AND SPECIAL PROGRAMS ADMINISTRATION, DEPARTMENT OF TRANSPORTATION

(Parts 100–177)

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SUBCHAPTER B—HAZARDOUS MATERIALS TRANSPORTATION AND PIPELINE SAFETY

SUBCHAPTER C—HAZARDOUS MATERIALS REGULATIONS

SUBCHAPTER A—TRANSPORTATION PROGRAMS BUREAU

PART 100—[RESERVED]

PART 101—OFFICE OF TRANSPORTATION SECURITY—CARGO SECURITY ADVISORY STANDARDS

Subpart A—General

Subpart B—Petitions for Advisory Standard Setting

Subpart C—Procedures

AUTHORITY: Sec. 9(e)(1), 80 Stat. 944 (49 U.S.C. 1657(e)(1)); Pub. L. 89-670 (49 U.S.C. 1653(d), 1655, 1657(e)) (18 U.S.C. 831-835; 49 CFR 1.45 and 1.53).

SOURCE: 38 FR 6998, Mar. 15, 1973, unless otherwise noted. Redesignated by Amdts. 85-1, and 101-1, 43 FR 43305, Sept. 25, 1978.

EDITORIAL NOTE: Nomenclature changes to Part 101 appear at 43 FR 43306, Sept. 25, 1978 (Amdt. 101-1).

Subpart A—General

§ 101.1 Applicability.

(a) This part prescribes the procedures for the development and promulgation of Cargo Security Advisory Standards. These advisory standards are suggested procedures and policies intended to assist all parts of the transportation industry in reducing the incidence of loss and theft of cargo entrusted to their care. The advisory standards are not mandatory, and nothing in them replaces or modifies any statutory requirement or any regulatory authority vested in any Federal, State, or local governmental body.

(b) As used herein:

"Advisory standard" means a Cargo Security Advisory Standard issued under this part;

"Director" means the Director of Transportation Security, Research and Special Programs Administration, Department of Transportation.

"Administrator" means the administrator of the Research and Special Programs Administration.

[38 FR 6998, Mar. 15, 1973. Redesignated by Amdt. 85-1, 43 FR 43305, Sept. 25, 1978, and amended by Amdt. 101-1, 43 FR 43306, Sept. 25, 1978]

§ 101.3 Initiation of advisory standard setting.

The Director, for the Administrator, may initiate advisory standard setting on his own motion. He may also, in his discretion, consider the recommendations of other agencies of the United States, of State and local government, of any part of the transportation industry, and of any other interested person.

§ 101.5 Participation by interested persons.

Any person may participate in advisory standard setting proceedings by submitting written information or views. The Director may also allow any person to participate in additional advisory standard setting proceedings, such as informal appearances or hearings, held with respect to any advisory standard.

§ 101.7 Docket.

(a) Records of the Research and Special Programs Administration, Department of Transportation concerning advisory standard setting actions, including notices of proposed advisory standard setting, comments received in response to those notices, petitions for advisory standard setting, petitions for rehearing or reconsideration, denials

of petitions for advisory standard setting, and final advisory standards are maintained in current docket form in the Office of the Chief Counsel of the Research and Special Programs Administration of the Department of Transportation.

(b) Any person may examine any docketed material at that Office and may obtain a copy of any docketed material upon payment of the prescribed fee.

Subpart B—Petitions for Advisory Standard Setting

§ 101.11 Filing of petitions.

(a) Any person may petition the Director to issue, amend, or repeal an advisory standard.

(b) Each petition filed under this section must:

(1) Be submitted in duplicate to the Docket Clerk, Chief Counsel, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590;

(2) Set forth the text or substance of the advisory standard or amendment proposed, or sepcify the advisory standard that the petitioner seeks to have repealed, as the case may be;

(3) Explain the interest of the petitioner in the action requested; and

(4) Contain any information and arguments available to the petitioner to support the action sought.

§ 101.13 Processing of petitions.

(a) *General.* No proceeding is held directly on a petition before its disposition under this section.

(b) *Grants.* If the Director determines that the petition contains adequate justification, he initiates advisory standard setting action under Subpart C of this part.

(c) *Denials.* If the Director determines that the petition does not justify initiating advisory standard setting, he denies the petition.

(d) *Notification.* Whenever the Director determines that a petition should be granted or denied, he and the Office of the Chief Counsel prepare a notice of that grant or denial for issuance to the petitioner, and the Director issues it to the petitioner.

Subpart C—Procedures

§ 101.21 General.

(a) A notice of proposed advisory standard setting is issued and interested persons are invited to participate in the advisory standard setting proceedings with respect to each advisory standard.

(b) In his discretion, the Director may invite interested persons to participate in the advisory standard setting proceedings described in § 101.29.

§ 101.23 Contents of notices.

(a) Each notice of proposed advisory standard setting is published in the FEDERAL REGISTER.

(b) Each notice includes:

(1) A statement of the time, place, and nature of the proposed advisory standard setting proceeding;

(2) A reference to the authority under which it is issued;

(3) A description of the subjects or issues involved or the substance or terms of the proposed advisory standard;

(4) A statement of the time within which written comments must be submitted and the required number of copies; and

(5) A statement of how and to what extent interested persons may participate in the proceedings.

§ 101.25 Petitions for extension of time to comment.

(a) Any person may petition the Director for an extension of time to submit comments in response to a notice of proposed advisory standard setting. The petition must be submitted in duplicate not later than 10 days before expiration of the time stated in the notice. The filing of the petition does not automatically extend the time for petitioner's comments.

(b) The Director grants the petition only if the petitioner shows a substantive interest in the proposed advisory standard and good cause for the extension, and if the extension is in the public interest. If an extension is granted, it is granted as to all persons and is published in the FEDERAL REGISTER.

§ 101.27 Consideration of comments received.

All timely comments are considered before final action is taken on an advisory standard setting proposal. Late filed comments may be considered so far as possible without incurring additional expense or delay.

§ 101.29 Additional advisory standard setting proceedings.

The Director may initiate any further advisory standard setting proceedings that he finds necessary or desirable. The Director may also invite interested persons to present oral arguments, participate in conferences, appear at informal hearings, or participate in any other proceedings.

§ 101.31 Hearings.

(a) Sections 556 and 557 of Title 5, United States Code, do not apply to hearings held under this part. As a fact-finding proceeding, each hearing is nonadversary and there are not any formal pleadings or adverse parties. The record in a proceeding may include matters other than those presented at the hearing. An advisory standard issued will be based exclusively on the record in the proceeding.

(b) The Director designates a representative to conduct any hearing held under this part. The Chief Counsel designates a member of his staff to serve as legal officer at the hearing.

§ 101.33 Adoption of final advisory standards.

Final advisory standards are prepared by the Director and the Office of the Chief Counsel. If the Director adopts an advisory standard, it is published in the FEDERAL REGISTER.

APPENDIX—CARGO SECURITY ADVISORY STANDARDS

PART 101-1—SEAL ACCOUNTABILITY AND PROCEDURES

SUBPART A—GENERAL

SUBPART B—DISTRIBUTION AND ACCOUNTABILITY

SUBPART C—SEAL RECORDS

SUBPART D—SEAL APPLICATION

SUBPART E—DESTINATION REMOVAL

SUBPART F—ROAD PROCEDURES

SUBPART G—SHIPPER'S LOAD AND COUNT (SL&C)

SUBPART H—U.S. GOVERNMENT AND "IN BOND" SEALS

AUTHORITY: Sec. 9(e)(1), 80 Stat. 944 (49 U.S.C. 1657(e)(1)); 49 CFR 101.3.

SUBPART A—GENERAL

SEC. 101-1.1 *Purpose.* (a) The purpose of this Part is to set forth minimum procedures and guidelines that should be observed in order to institute and maintain an effective seal program.

(b) The provisions herein are general and each may not apply to every transportation mode.

SEC. 101-1.3 *Definitions.* As used in this part:

"Seal" means a device applied to a rail car, trailer, marine container, or air cargo container door fastening which:

(1) Indicates whether the door has been opened or the fastening tampered with, and, if so, at what point in the chain of custody the tampering occurred;

(2) Is easily applied to all types of fastenings;

(3) Readily shows when it is not properly fastened;

(4) Is of sufficient strength to resist accidental breaking;

(5) Cannot be made to appear intact when broken;

(6) Has sufficient letters to identify the carrier or shipper; and

(7) Is serially numbered to facilitate identification of the person who applied the seal.

"Transportation unit" means a container, piggyback trailer, or standard semi-trailer used by a motor carrier.

Subpart B—Distribution and Accountability

Sec. 101-1.11 *Purpose.* The purpose of this subpart is to suggest measures designed to assure that seals are strictly accounted for from receipt from the manufacturer to time of application. Resources devoted to a seal program are wasted unless this goal is achieved.

Sec. 101-1.13 *Ordering seals from the manufacturer.* (a)(1) To simplify security control for both the company using the seals and the manufacturer, all seals should be ordered from the manufacturer by one person or office, preferably in company headquarters, regardless of the number of terminals or other locations involved.

(2) The manufacturer can send the necessary seals directly to the individual terminals, but only at the request of the person or office identified in paragraph (a)(1) of this section.

(b) Seals should be ordered for each terminal in such a way that the terminal responsible for a particular group of seals is readily identifiable. This can be done by assigning specific blocks of numbers to each terminal, or, more easily in most cases, by using terminal prefix numbers.

Sec. 101-1.15 *Company identification.* In addition to a prefix and a serial number, the name or initials of the company using the seal or of the carrier should be stamped on each seal.

Sec. 101-1.17 *Storage.* (a) The purpose of storage is to prevent seals from being acquired by unauthorized persons for substitution or other illegal use.

(b) Seals should be stored in a locked room, cabinet or drawer, depending on the number of seals to be stored.

Sec. 101-1.19 *Records.* (a) If seals are sent from the manufacturer to a central office for further distribution to terminals, precise records, by seal serial number, should be maintained showing how many seals were sent to each location.

(b) When the terminals or other locations receive seals, either directly from the manufacturer or from company headquarters, a log should be maintained showing the lowest serial number and highest serial number of any seal received, and the date the seals were received.

Sec. 101-1.21 *Employee accountability.* (a) To maintain positive accountability, each employee authorized to apply seals should be required to sign or initial for the seals he applies, by their serial numbers.

(b) The person responsible for dispensing seals at a terminal should maintain a Seal Application Log showing, for each seal, the

(1) Date the seal is applied;

(2) Number of the transportation unit to which it is applied;

(3) Name of the person to whom the seal is issued; and

(4) Name of the person applying the seal to the transportation unit, if other than the person to whom the seal is issued.

Sec. 101-1.23 *Accountability at terminals.* The manager of the terminal where seals are applied should assign one person responsibility for the safekeeping, issuance, and record keeping of seals applied at that terminal. This is the most important step in an effective seal program.

Subpart C—Seal Records

Sec. 101-1.31 *Purpose.* (a) Common sense and the particular circumstances of each company dictate the types of records necessary. The goal of seal records is to pinpoint where in the chain of custody a transportation unit's security was breached, in order to simplify determination of where the loss occurred, who was responsible, and other information necessary to prevent future losses. Problem areas cannot be pinpointed unless there are adequate accountability and complete records.

(b) The purpose of this subpart is to suggest measures designed to determine:

(1) Who had custody of each seal;

(2) When, where, and to which unit each seal was applied; and

(3) When, where, and by whom each seal was broken.

Sec. 101-1.33 *Seal serial numbers.* (a) Record should be maintained of the serial numbers of seals:

(1) Received at each terminal; and

(2) Issued to authorized employees for application to transportation units.

(b) In addition to being entered in seal record books, forms, and logs used by a company, seal serial numbers should also be entered on all pertinent documents (e.g., manifests, load charts or diagrams, travel orders, gate passes, bills of lading, freight bills).

SEC. 101-1.35 *Broken seals.* When necessary to break a seal en route or at an intermediate terminal, the following minimum information should be entered on the manifest (and seal log, if used):

(a) Date and time seal was broken;

(b) Name of person who broke seal;

(c) Reason seal was broken;

(d) Serial number of the seal replacing the broken seal (and the serial number of the broken seal, if a seal log is used);

(e) Name of person applying the replacement seal; and

(f) Names of witnesses.

SEC. 101-1.37 *Use of guards.* Where a gate guard is used, he should check the seal serial number against the gate pass and travel order and, ideally, enter in a gate log the serial number of:

(a) Each seal;

(b) The transportation unit to which the seal is applied; and

(c) The tractor to which a trailer is attached.

SUBPART D—SEAL APPLICATION

SEC. 101-1.41 *Time of seal application.* (a) Seals should be applied:

(1) As soon as the transportation unit has been loaded, or

(2) As soon as a loaded unsealed or improperly sealed unit is detected, or

(3) After a necessary opening en route, as soon as the reason for the opening has been accomplished. A "necessary opening en route" may be dictated by either an authorized person or an emergency situation.

(b) Application of seals should be supervised. Failure to supervise or allowing the hostler to move an unsealed transportation unit to a staging area offers opportunity to:

(1) Pilfer prior to applying the seal; or

(2) Apply a bogus seal, break the seal later, remove cargo, and then apply the legitimate seal.

SEC. 101-1.43 *Authority to apply seals.* (a) The manager of the terminal should authorize specific persons on each shift to apply seals at that terminal, and only those so authorized should be permitted to apply seals.

(b) The number of persons who should be authorized to apply seals depends on the particular circumstances at each terminal. The number should be kept to a minimum to facilitate adequate supervision to assure that operational expediency does not permit application of seals by unauthorized persons.

SEC. 101-1.45 *Application.* Locking device nuts on trailers and containers should be spot welded to prevent release of the locking handle without disturbing the seal.

SEC. 101-1.47 *Final check.* (a) The seal should be checked by the line haul or interline driver before the vehicle to which it is applied leaves the terminal.

(b) If there is a guard at the gate, he should ensure that the seal is legitimate and intact before releasing the vehicle to which it is applied.

SUBPART E—DESTINATION REMOVAL

SEC. 101-1.51 *Authority to remove seals.* (a) The terminal manager should authorize specific persons to remove seals from inbound transportation units, and, except as otherwise provided in paragraph (b) of this section, only those so authorized should be permitted to remove seals.

(b) To insure before unloading that the seal removed is the original, if a hostler has to break and remove a seal on a swing-door transportation unit before spotting it at the dock, the breaking of the seal should be witnessed from the dock by an authorized person described in paragraph (a) of this section, who should physically check the serial number on the seal against the seal serial number entered on the pertinent documents. A hostler should not be permitted to break a seal prior to spotting the transportation unit to which it is applied when the breaking cannot be observed from the dock.

SEC. 101-1.53 *Discrepancies.* (a) A seal removed from a transportation unit should be kept with the manifest and bills until the transportation unit is stripped.

(b) If there is not a discrepancy between the manifest and the cargo the seal may be discarded; if there is a discrepancy, especially in tail-loaded freight, the seal should be sent with a report on the discrepancy to the security section.

(c) A discrepancy between the serial number on the seal and the seal serial number entered on the manifest should be reported immediately to a supervisor and a notation of the details made on the manifest and other pertinent documents.

SUBPART F—ROAD PROCEDURES

SEC. 101-1.61 *Truck trailers.* (a) Each seal should be checked prior to leaving the terminal and at each stop en route to destination, including truck stops, diners, and other service areas.

(b) If a highway unit's seal has been tampered with, the driver should immediately contact home terminal, central dispatch, or the nearest company terminal for instructions.

SEC. 101-1.63 *Container and piggyback operations.* (a) In a container or piggyback operation each seal should be checked at each transfer point and the serial number on each seal recorded.

(b) As used in this section, "transfer" includes:

(1) Movement of containers on and off vessels;

(2) Movement of trailers on and off flat cars; and

(3) Trailer-on-flat-car movements from one railroad to another.

SEC. 101-1.65 *Rail cars.* Consistent with manpower and available time, but at the very least when high value/high risk shipments are involved, each seal on a rail car should be checked at each interchange point to establish the responsibility of individual railroads for losses that occur.

SUBPART G—SHIPPER'S LOAD AND COUNT (SL&C)

SEC. 101-1.71 *General.* It is to the advantage of carriers in every mode to insure the security of Shipper's Load and Count Seals. This could be accomplished by use of "seal locks", offering both physical and liability protection, or, at a minimum, strong wire or cable in addition to a normal seal. This precaution increases the time and effort necessary to break into a rail car, container, or trailer, with concomitant protection to a carrier against errors in count by shipper and/or consignee.

SEC. 101-1.73 *Application.* (a) The Shipper's Load and Count Seal should be applied at the shipper's premises by the shipper's representative.

(b) The seal serial number should be recorded on all copies of the bill of lading and transcribed to the waybill.

SEC. 101-1.75 *Removal for inspection.* When a Shipper's Load and Count Seal is removed to inspect the load, the following minimum information should be entered in the bill of lading and freight bills;

(a) Date seal was removed;

(b) Name of person who broke the original seal and applied the new seal;

(c) Reason the seal was broken;

(d) Serial number of the seal which replaced the broken seal; and

(e) Location where seal was broken.

SEC. 101-1.77 *Destination procedure.* At destination, whether interline or consignee, the person receiving a trailer or rail car sealed with a Shipper's Load and Count Seal should examine the seal and record its serial number above his signature on the delivery receipt and/or interchange agreement.

SEC. 101-1.79 *Responsibility of the driver.* (a) A driver should not break a Shipper's Load and Count (SL&C) Seal under any circumstances unless he is so directed by the consignee or his representative and the person so directing witnesses the breaking of the seal.

(b) If the consignee or his representative directs a driver to break an SL&C seal:

(1) The consignee or his representative should examine the broken seal; and

(2) The consignee or his representative, or if necessary, the driver, should record the seal serial number on the delivery receipt.

SUBPART H—U.S. GOVERNMENT AND "IN BOND" SEALS

SEC. 101-1.81 *General.* Notwithstanding any other provision of this part, neither a U.S. Government seal nor any "in bond" seal applied under U.S. Customs supervision should be broken without adhering to the rules and regulations pertaining thereto.

[38 FR 16873, June 27, 1973. Redesignated by Amdts. 85-1, and 101-1, 43 FR 43305, Sept. 25, 1978]

PART 101-2—HIGH VALUE COMMODITY STORAGE

SUBPART A—GENERAL

SUBPART B—LOCATION OF SECURITY CRIB

SUBPART C—CONSTRUCTION OF SECURITY CRIB

SUBPART D—ACCESS AND CONTROL

SUBPART E—ACCOUNTABILITY

SUBPART F—SECURITY

AUTHORITY: Sec. 9(e)(1), 80 Stat. 944 (49 U.S.C. 1657(e)(1)); 49 CFR 101.3.

SUBPART A—GENERAL

SEC. 101-2.1 *Purpose.* (a) The purpose of this part is to set forth minimum procedures and guidelines that should be observed in order to minimize the risk of loss of high-value cargo.

(b) The provisions herein are general and each may not apply to every transportation mode.

SEC. 101-2.3 *Definitions.* As used in this part:

"Custodian" means a person having direct day-to-day control of a security crib, including custody of and responsibility for the contents thereof.

"High-value cargo" means cargo handled at a facility, which cargo, because of its monetary value, utility, desirability, or history of frequent theft, requires greater protection than other commodities normally handled at the facility.

"Security crib" means an enclosure for temporary storage of high-value cargo; also referred to as "cage", "corral", "vault", or "lockup".

SUBPART B—LOCATION OF SECURITY CRIB

SEC. 101-2.11 *Location.* (a) A security crib should be located in the vicinity of and, ideally, within sight of, the terminal or dock office. It should not be located in a remote area of the facility.

(b) The location should be conducive to frequent, if not continuous, surveillance by supervisory personnel.

(c) Large facilities may require two security cribs, one at each end, provided there is opportunity for reasonable surveillance of both security cribs.

SEC. 101-2.13 *Separation from over, short, and damaged crib.* A security crib should be separate from an over, short, and damaged crib. Over and damaged freight should not be stored in a security crib unless it is of high value.

SEC. 101-2.15 *Small facilities.* (a) In a small facility space limitations may prevent the use of a security crib. In such an instance high value cargo should be stored in an area specifically designated and reserved for this purpose.

(b) The area described in paragraph (a) of this section should be:

(1) Clearly marked;

(2) Made off-limits to unauthorized personnel;

(3) Within sight of the dock office; and

(4) Capable of constant supervisory observation.

SUBPART C—CONSTRUCTION OF SECURITY CRIB

SEC. 101-2.21 *Materials.* A security crib should be constructed of substantial materials which make the crib resistant to forced entry on all sides, underneath, and overhead.

SEC. 101-2.23 *Size.* (a) A security crib should be of a size adequate for storage of all high-value cargo present at the facility at any time. It should not be so large, however, as to encroach upon space necessary for normal operations, thereby resulting in the use of security crib space for other than high-value cargo.

(b) The walls of a security crib should extend to the ceiling of the room in which it is located or be at least 10 feet high with a substantial top or roof resistant to forced entry.

(c) When a shipment of high-value cargo is too large to be stored entirely within a security crib, it should be:

(1) Segregated from other cargo;

(2) Stored within sight of supervisory personnel; and

(3) Physically inspected at least daily by a supervisor for indication of theft or pilferage.

SEC. 101-2.25 *Visual observation.* Construction should permit visual observation of the entire security crib from the outside to deter unauthorized entry and covert tampering with the high-value cargo therein.

SEC. 101-2.27 *Portable security crib.* In the event that use of a portable security crib is necessary, its sides should be securely fastened to the ground to prevent entry underneath by raising of the security crib with a forklift, jack, or other lift equipment.

SUBPART D—ACCESS AND CONTROL

SEC. 101-2.31 *Custodian.* (a) When size of an operation or volume of high-value cargo requires extensive use of a security crib, a custodian should be designated as the one person directly responsible for control of the security crib. At all times access to the security crib should be under the direct control of the custodian and should be limited to those persons having legitimate business in the security crib.

(b) If the size or nature of the particular operation does not warrant the designation of a custodian, supervisory or other predesignated responsible personnel should be authorized to conduct necessary business at the security crib so long as access is properly documented.

SEC. 101-2.33 *Entrance in absence of custodian.* (a) Where the volume of business conducted at a security crib is substantial and a custodian has been designated, any additional duties assigned to the custodian should be limited to minimize the necessity to enter a security crib in his absence.

(b) If entrance to a security crib in the absence of the custodian is unavoidable, the entrance should be:

(1) Conducted in the presence of supervisory personnel;

(2) Subsequently reported to the custodian; and

(3) Entered on appropriate records.

SUBPART E—ACCOUNTABILITY

SEC. 101-2.41 *Control log.* (a) A control log should be maintained at a security crib, listing all cargo transferred into and out of the security crib.

(b) The log should contain information sufficient to identify positively:

(1) The cargo transferred;

(2) The time of the transfer; and

(3) The identity of the persons involved in the transfer.

(c) Every transfer should be observed by a supervisor or other predesignated responsible person, or the custodian if one has been designated, and entered in the log.

SEC. 101-2.43 *Physical inventory.* (a) Consistent with the size of the security crib and the amount of cargo stored therein, a physical inventory of all freight in the security crib should be made periodically. Comparison should then be made with the log described in § 101-2.41 of the part or with a running inventory.

(b) The interval between inventories should not exceed 30 days. Cleared inventory records should remain on file.

SEC. 101-2.45 *Theft or pilferage.* Whenever there is evidence of theft or pilferage from the security crib an immediate and thorough investigation should be conducted. Proper records will indicate when a loss occurred and the persons involved.

SEC. 101-2.47 *Discrepancies.* A security crib should be inspected daily by the facility manager or his representative with discrepancies investigated immediately and errors in procedures brought to the attention of supervisors concerned as quickly as possible.

SEC. 101-2.49 *Completed logs.* Completed logs should be kept in a secure place for at least one year or such other period of time as the company feels they may be needed for investigation of claims.

SUBPART F—SECURITY

SEC. 101-2.51 *Lock.* (a) A security crib should be securely locked when unattended.

(b) The lock should be changed:

(1) Periodically to minimize the effect of unauthorized duplication of the key; and

(2) Immediately whenever a key to the lock is missing or otherwise unaccounted for.

(c) Serial numbers should be removed from the lock and all keys.

SEC. 101-2.53 *Keys.* (a) Keys to the lock on a security crib should be kept by authorized supervisory or other predesignated responsible personnel, or the custodian if one has been designated, and be placed in a locked key box or other secure place at the close of business.

(b) To preclude surreptitious duplication, keys should never leave the facility nor be given, even temporarily, to unauthorized persons.

(c) The number of duplicate keys should be kept to a minimum, and duplicate keys should be accorded the same protection as the original keys.

SEC. 101-2.55 *Surrounding area.* Floor space immediately adjacent to a security crib should be kept clear of stocked cargo which can reduce visibility.

SEC. 101-2.57 *Electronic surveillance.* Depending upon the value of cargo stored in a security crib, the number of transfers thereto and from, and other variables, continuous electronic surveillance of a security crib may be advisable. In such a case, a responsible person or persons should be assigned responsibility of monitoring the television receivers. The versatility of closed circuit television combined with a video tape recorder is ideal for electronic surveillance of a security crib when continuous monitoring of the television receivers is not possible. If tapes are used, they should be reviewed periodically to determine whether unauthorized entry occurs.

SEC. 101-2.59 *Procedures in lieu of a security crib.* The size of an operation, the geographic area in which a facility is located, and the prior loss record may indicate that a security crib is not needed at a particular facility. Special procedures for controlling high-value cargo should still be used and may include:

(a) Storage in a special area;

(b) Storage in the over, short, and damaged crib;

(c) Daily inventories; and

(d) Continuous surveillance.

SEC. 101-2.61 *Protective lighting.* To enhance visual surveillance of and to deter the theft of items from security cribs, adequate lighting should be provided within and without the crib. Such lighting should be sufficient to permit detection and later identification of intruders by electronic surveillance or by security guards.

[38 FR 22383, Aug. 20, 1973. Redesignated by Amdts. 85-1, and 101-1, 43 FR 43305, Sept. 25, 1978]

PART 101-3—INTERNAL ACCOUNTABILITY PROCEDURES

SUBPART A—GENERAL

SUBPART B—SHIPPER CARGO ACCOUNTABILITY AND PROCEDURES

AUTHORITY: Sec. 9(e)(1), 80 Stat. 944 (49 U.S.C. 1657(e)(1)); 49 CFR 101.3.

SUBPART A—GENERAL

SECTION 101-3.1 *Purpose.* (a) The purpose of this part is to set forth minimum procedures and guidelines that should be observed in order to account for each step in the cargo movement process and to fix responsibility when exceptions occur.

(b) The provisions herein are general and each may not apply to every transportation mode.

SEC. 101-3.3 *General.* (a) All areas in which documents necessary for the proper movement or accountability of cargo are processed or handled should be treated as maximum security areas. Specifically, personnel should be restricted from:

(1) Congregating in or using for breaks, and

(2) Entering unless authorized:

these areas, and bills of lading and other documents should not be left unattended in these areas.

(b) Personnel preparing or processing the flow of documents and those having access to documents in any way should be included in the chain of accountability of those documents. Generally, such documents should be retained for at least one year; bills of lading should be retained for three years.

SEC. 101-3.5 *Definitions.* As used in this part:

"Airbill" means the shipping document used for both the air and motor portions of a freight movement.

"Bill of lading" means the document by which a carrier acknowledges receipt of freight and contracts for its carriage.

"Carrier" means a common or contract carrier, but does not mean a private carrier.

"Dock receipt" means the receipt given for a shipment received or delivered at a pier or dock covering cargo for export.

"Freight bill" means the carrier invoice for charges rendered to the consignee, the consignor, or a third party, according to the terms of the bill of lading, and showing:

(1) Consignor and origin;
(2) Consignee and destination;
(3) Route;
(4) Transportation unit number;
(5) Description of shipment;
(6) Weight, rate, and charges; and
(7) Charges prepaid, collect, or billed to a third party.

"High-value cargo" means cargo handled at a facility, which cargo, because of its monetary value, utility, desirability, or history of frequent theft, requires greater protection than other commodities normally handled at the facility.

"Manifest" means the document describing a vessel's cargo or the contents of a truck.

"Sensitive cargo" means cargo handled at a facility, which cargo, because of its strategic value, constitutes a significant national security risk requiring greater protection than other commodities normally handled at the facility.

"Shipper Load and Count" means that the contents of the transportation unit were loaded and counted by the shipper and not verified by the carrier.

"Shipping container" means any receptacle used for shipping a product.

"Transportation unit" means a trailer, intermodal container, truck, vessel, or railcar.

"Waybill" means the document prepared by a carrier at the point of origin of a shipment and forwarded with the shipment, or directly by mail, to the agent at the transfer point or waybill destination, and showing:

(1) Point of origin;
(2) Destination;
(3) Route;
(4) Consignor;
(5) Consignee;

(6) Description of shipment;
(7) Amount charged for carriage; and
(8) Charges prepaid or collect.

SUBPART B—SHIPPER CARGO ACCOUNTABILITY AND PROCEDURES

SEC. 101-3.11 *Purpose.* The purpose of this subpart is to set forth minimum procedures and guidelines to assist shippers in preparing cargo for shipment.

SEC. 101-3.13 *General.* Shippers should:

(a) Number all shipping containers in a shipment and record such numbers on the shipping documents. In addition, each container in a shipment of more than one container should be marked thusly: One of four, two of four, etc.

(b) Place clear and complete delivery and handling instructions on one end, one side, and the top of each shipping container.

(c) In marking shipping containers, use indelible inks and paints and water-resistant labels to preclude obliteration or loss of marks, shipping instructions, and handling symbols.

(d) Forward all shipping documents promptly to minimize delay at domestic and international transfer points.

(e) Count the number of pieces in each shipment and retain a record of the count and condition of the pieces and of the legible signature and employee number of the employee making the count.

(f) When practical, enclose a packing list in each container in a shipment to permit timely and complete investigation of any pilferage or damage.

(g) Consolidate small or non-uniform containers into single-load units. Unitize, palletize, and use intermodal containers whenever possible. Pilfer-proof sealing tape, corrugated fasteners, string wrapping, strapping, and banding reduce theft and pilferage.

(h) Require carrier personnel to verify their identity and restrict them to authorized areas. For each shipment, record the names of the driver and carrier, vehicle number, name of consignee, and number of pieces and total weight of the shipment.

(i) Before releasing a shipment to a carrier obtain in ink or indelible pencil the signature of the driver verifying receipt of the freight listed on the manifest.

(j) File in tamper- and theft-proof repository all copies of bills of lading, dock receipts, airbills, waybills, manifests and other documents. Generally, documents should be kept for one year; bills of lading should be kept for three years.

(k) Refrain from preprinting well-known trade names, or stenciling information about contents, on shipping cartons.

(l) If secondhand containers are used, obliterate all previous markings.

SUBPART C—CARRIER CARGO ACCOUNTABILITY AND PROCEDURES

SEC. 101-3.21 *Equipment controls.* At facilities at which cargo is handled, there should be established and maintained controls on the use on docks and platforms of all handling and moving equipment such as handcarts, forklifts, etc.

SEC. 101-3.23 *Outbound freight procedures: Pickup.* (a)(1) When a pickup call is received, a pickup order or slip for the pickup driver should be prepared.

(2) The pickup order should include the date and time of call, the names of the shipper and the consignee, the number of pieces and total weight of the shipment, and the name of the driver.

(b) When the pickup driver arrives at the shipper's facility, he should note the condition of the shipment, count the pieces therein, and compare the count with that shown on the bill of lading. He should then record the date, the number of pieces, and his truck number on the pickup order and the bill of lading and sign his name legibly in ink or indelible pencil.

(c) Upon return to the carrier's terminal, the pickup driver should report to the cashier and surrender all documents and receipts. At this time all documents and receipts should be checked for completeness and accuracy.

(d)(1) The cashier should forward the bills of lading and pickup orders to the manifest clerk who prepares the dock manifest showing the names of the driver, the shipper, and the consignee, the unit number, date, and number of pieces and total weight of the shipment. A copy of the bill of lading should be forwarded to the billing office where the invoice is prepared, the bill of lading is retained, and the line haul manifest is prepared.

(2) Control copies of all bills of lading and other documents used at the terminal should be retained.

(3) Documents for high-value cargo should be specially designated, as by a stamp such as "Supervisor sign". Such cargo itself should be handled in accordance with Part 101-2 of this Appendix, "High-Value Commodity Storage".

SEC. 101-3.25 *Outbound freight procedures: Stripping and loading.* (a) At the carrier's terminal, a separate area should be designated for each of the following types of cargo; outbound, inbound, hold-on-dock, order notify, and OS&D (over, short and damaged).

(b) Upon receiving a dock manifest, a supervisor should code the manifest as to door and unit number and assign a dockman to the particular manifest. Bay doors and equipment should be clearly and properly marked.

(c) The dockman should work from the dock manifest. He should strip the unit and, if freight is docked, note its location on the bill of lading and forward the bill to the office. Bills of lading should not be left with docked freight. If high-value commodities are docked, they should be placed in a security crib pending delivery or transfer in accordance with Part 101-2 of this Appendix, "High-Value Commodity Storage".

(d) If freight is loaded the dockman should note on the manifest, in ink or indelible pencil, the number of the outbound trailer, dock number, number of pieces and total weight of the shipment, date, origin number, and his legible signature, and return the manifest to the supervisor.

(e) Exceptions should be brought to the attention of the O. S. & D. clerk and the supervisor immediately. Drivers should be questioned about exceptions as soon as practical. Any trends should be noted, recorded, and acted upon.

(f) The supervisor should compare the manifest with the typed bills of lading, record the line haul unit number on the bills, and sort the bills by destination terminal and line haul unit. Matching bills with freight maintains the audit trail and obviates having bills for which there is no freight and freight for which there are no bills.

(g) The line haul unit should then be closed by a switcher or supervisor. Whoever is authorized to apply seals should then seal the unit and record on the seal log, in ink or indelible pencil, the seal serial number and his legible signature.

(h) The outbound manifest and typed bills by unit should be put together and seal serial numbers recorded in the office by a supervisor.

(i) The outbound manifest and bills of lading should be given to the line haul driver and the unit and seal serial numbers should be checked at the gate upon departure. Both verbally and in writing, the driver should be given instructions regarding handling of any high-value, sensitive, or hazardous cargo.

SEC. 101-3.27 *Return freight.* (a) Procedures should be established requiring that all returned high-value cargo and other selected commodities be stripped and the appropriate bills of lading returned to the office. Common sense should dictate the handling of bulk cargo.

(b) Return freight and its paperwork should be reinserted into the cargo handling process as soon as possible. The driver's legible signature, the location of the return freight on the dock, and the reason for its return should become permanent records of the carrier. A substantial part of claims paid is attributable to improper handling of return freight.

SEC. 101-3.29 *Inbound freight procedures: stripping and loading.* (a) When the line haul unit arrives at the destination terminal, the unit number and seal serial number should be checked at the gate and recorded. The driver should take the inbound manifest and bills of lading to the office where the bills should be routed to the delivery unit by door number. One control copy of the manifest and of each bill should be kept in the office.

(b) Only authorized personnel should remove a seal from an inbound trailer. If a hostler has to break and remove a seal on a swing-door trailer before spotting it at the dock, the breaking of the seal should be witnessed from the dock by an authorized person who should check the serial number on the seal against the seal serial number entered on pertinent documents, in accordance with Part 101-1 of this Appendix, "Seal Accountability and Procedures".

(c) The Inbound Supervisor should record on the line haul dispatch sheet the date, arrival time, and unit number. He should also check the number of bills against the manifest and record the date and unit number on each bill.

(d) When the dockman receives the bills he should begin to strip and load. If freight is docked, he should record on the appropriate bill, in ink or indelible pencil, the location of the freight on the dock, his legible signature, and dock number. If high-value commodities are docked, they should be placed in a security crib in accordance with the provisions of Part 101-2 of this Appendix, "High-Value Commodity Storage" If the freight is loaded, the dockman should record on each bill, in ink or indelible pencil, the unit number and his legible signature before returning the bills to the supervisor.

SEC. 101-3.31 *Inbound freight procedures: Delivery.* (a) The supervisor should match the bills of lading signed and returned by the dockman with the control copies and verify the signature of the dockman. He should then prepare the city manifest and put it into the unit "pigeon hole", pouch, or file.

(b) The assigned driver should receive the city manifest and bills from dispatch. He should note and place in the driver pouch the delivery receipt, consignee memo, driver work card, tally sheet, and detention slip.

(c) Upon leaving the terminal, the driver should be checked at the gate for seal or lock, as appropriate. Unit number, time, and date should be recorded.

(d) Upon return to terminal, the city driver should turn in to the cashier the receipts, bills, and city manifests.

SUBPART D—EXCEPTIONS

SEC. 101-3.41 *LTL freight.* LTL (Less Than Truck Load) freight should be counted and checked for visible damage at each step of the cargo handling process. This should begin at pickup where the carrier's liability attaches with the driver's signature. This should continue as the freight moves through the carrier's operation and should terminate only when the consignee accepts delivery with a clear receipt.

SEC. 101-3.43 *Dockman responsibilities.* The dockman who strips the pickup unit, the one who loads the line haul unit, the one who unloads the line haul unit, and the one who loads the delivery unit each should sign for the count and apparent physical condition of each shipment that he handles.

SEC. 101-3.45 *Driver responsibility.* Drivers should call in any exceptions immediately and a call-in log should be maintained.

SEC. 101-3.47 *Supervisor responsibility.* Exceptions should be immediately reported to a supervisor who should attempt to resolve them immediately. Exceptions which should be reported to supervisors include not only those of count and damage but also those of instances of bills of lading for which there is no freight and freight for which there are no bills.

SUBPART E—INTERCHANGE

SEC. 101-3.51 *General.* A substantial part of cargo is interchanged between carriers, often in the same mode. Cargo moving by water or air often must be handled at terminals and/or over piers, where cargo moves from railroad or truck to forwarder or stevedoring company and then to aircraft or vessel. At the terminus of the movement, the process is reversed. These transfer points are the most vulnerable places for loss of cargo. The same type of accountability procedures apply equally well to export, import, and domestic cargo.

SEC. 101-3.53 *Air cargo.* (a) Air carriers should count the number of shipping containers and their condition when receiving or delivering cargo. Cargo going from terminal to ramp via cart should be counted as it enters the belly of the aircraft. At destination, it should again be counted as it comes out of the aircraft prior to arrival at the terminal.

(b) The carrier should manifest all shipments for delivery on a trucking manifest. The manifest should show:

(1) Names of drivers and the motor carrier and truck number.

(2) Name of air carrier employee checking cargo into truck.

(3) Date and station preparing manifest.

(4) Names of shipper and consignee, air bill number, number of pieces and total weight of shipment.

(5) Any exceptions and name of agent preparing manifest.

(6) Legible signature of the truck driver, in ink or indelible pencil, verifying receipt of cargo as shown on manifest.

SEC. 101-3.55 *Marine cargo.* (a) Stevedoring companies or terminal operators should keep a tally of cargo as it is off-loaded from the vessel to the terminal and provide tally and O. S. & D. reports to the water carrier or his agent.

(b) Marine checkers should be assigned to count pieces, verify count and legibly sign appropriate documents in ink or indelible pencil. The original dock receipt should be retained as a permanent record.

(c) Cargo should not remain in terminals overly long. Delay in sorting, depalletizing, vanning, or devanning contributes to theft and pilferage.

(d) Longshoremen should be supervised and cargo checked when loaded from terminals. Marine checkers should be present to count and verify and obtain legible signatures, during loading and tie-down on truck or railcars.

SEC. 101-3.57 *Interchange: truck and rail or vessel and rail.* Interchange between truck and rail or vessel and rail generally involves movement into a terminal and then to a railcar. Accountability is generally assumed by the party responsible for the loading, counting, and sealing per tariffs duly filed with the Federal Maritime Commission or the Interstate Commerce Commission. The rail carrier checks the seal and as long as the seal remains intact assumes no liability for shortages discovered at destination. In a situation of Shipper Load and Count, if seals remain intact, the shipper assumes liability for shortage.

SUBPART F—CONTAINERS, PALLETIZING, AND UNITIZING

SEC. 101-3.61 *Intermodal containers.* (a) Intermodal containers, adaptable to carriage by truck, railcar, barge, and ocean-going vessel, reduce vulnerability to pilferage and theft and eliminate multiple handling of individual items of cargo. A shipper can use such containers to convey goods directly from his premises to his customers.

(b) Reduced handling requirements simplify accountability for shipper, carrier, and consignee. Shippers assume responsibility for accuracy of the count; so long as containers remain sealed and intact, carriers are not liable for shortages.

(c) Verification and recording of seal serial numbers in accordance with company procedures (see Part 101-1 of this Appendix, "Seal Accountability and Procedures") assures accountability in the chain of custody.

SEC. 101-3.63 *Air cargo containers.* Air cargo containers designed specifically for the configuration of aircraft offer the same

advantages as intermodal containers. They provide for more efficient use of the capacity of the aircraft, reduce the number of pieces that must be counted and handled, and minimize exposure to weather, theft, pilferage, and damage, thereby simplifying accountability.

SUBPART G—CONSIGNEE CARGO ACCOUNTABILITY AND PROCEDURES

SEC. 101-3.71 *General.* Delay in taking delivery of cargo increases the possibility of theft and pilferage and makes recovery of lost shipments and pieces more difficult. Since pilferage from shipping containers can sometimes escape detection at time of delivery, consignees should:

(a) Inspect shipping containers for signs of break-in, opening, crushing, and resealing. Shipping containers should be inventoried in the presence of a carrier employee.

(b) Weigh shipping containers and compare the weights with those recorded on pertinent documents.

(c) Note on the carrier's receipt the number of pieces in each shipping container as well as their condition.

(d) Obtain, in ink or indelible pencil, the legible signature of the driver on consignee's copy of the receipt.

(e) Inspect cargo as soon after receipt as practical to determine any loss or damage, regardless of the apparent condition of the cargo at time of delivery, and report any exceptions.

(f) Obtain a copy of the carrier's delivery receipt and file it with copies of the other documents concerning the cargo.

(g) Retain as a permanent record the legible signature, in ink or indelible pencil, piece count, and condition verification of the employee accepting the cargo.

(h) Retain all essential documents for at least one year; bills of lading should be retained for three years.

SUBPART H—"IN BOND" CARGO

SEC. 101-3.81 *General.* Special care should be taken with "in bond" cargo handled under Customs supervision. United States Customs inspectors count, to the greatest extent possible, merchandise landed and quantities delivered. They also verify selected bills of lading at time of unloading. Ordinarily they do not use tally sheets, O. S. & D. (over, short, and damaged) reports, or other records of the importing carrier to determine quantity.

[39 FR 4085, Feb. 1, 1974; 39 FR 5190, Feb. 11, 1974. Redesignated by Amdt. 85-1, and 101-1, 43 FR 43305, Sept. 25, 1978]

PART 101-4—CARGO LOSS REPORTING SYSTEM AND PROCEDURES

SUBPART A—GENERAL

SUBPART B—ELEMENTS OF A SYSTEM

SUBPART C—SYSTEM ORGANIZATION, GUIDELINES AND PROCEDURES

SUBPART A—GENERAL

Sec. 101-4.1 *Purpose.* (a) The purpose of this part is to set forth minimum procedures and guidelines athat should be observed in establishing a cargo loss reporting system.

(b) The provisions herein are general and each may not apply to every transportation mode. Adaptation may be necessary to suit mode pecularities and individual carrier needs.

Sec. 101-4.3 *General.* The movement of cargo by carrier involves an inherent risk of loss from theft and other causes due mainly to its exposure in the transportation system. Thus, the transportation carrier with this inherent characteristic should establish a cargo loss reporting system which will provide information, safeguards, and practices to protect the cargo entrusted to him by the shipping public. The need for timely, accurate and definitive cargo loss information is essential to a successful cargo claims prevention program. Early identification of the cause of cargo losses through theft, hijack, pilferage, or other reasons is an essential step to prevention and cure.

Sec. 101-4.5 *Definitions.* As used in this part:

"Bill of lading" means the document by which a carrier acknowledges receipt of freight and contracts for its carriage. Also known as "ocean bill of lading" and "air bill of lading."

"Carrier" means a common or contract carrier, but does not mean a private carrier.

"C.O.D." means collect on delivery for invoice value of the goods.

"Connecting line" means another carrier with whom the original carrier interlines a

shipment for thru movement from origin to destination. Also known as "interline."

"Consignee" means the designated receiver of merchandise.

"Consignor" means the shipper of merchandise.

"Damage" means impairment of cargo shipment or contents.

"Destination terminal" means the terminal from which carrier makes final delivery. Also known as "destination port."

"Exception" means a deviation from the condition or quantity as shipped.

"Forced billing" means an internal document used by carriers to cover movement of a shipment from one terminal to another, when there is no way bill to cover, and is also used as a delivery receipt until the proper paperwork is found or prepared.

"Free astray" means a form used by carriers to cover movement of an over-shipment from one terminal to another until it can be matched up with paperwork or other disposition made.

"Hijack" means stealing a cargo vehicle by force or threat of bodily harm.

"High-value cargo" means cargo handled at a facility, which because of its monetary value, utility, desirability, or history of frequent theft, requires greater protection than other commodities normally handled at the facility.

"Intermediate terminal" means a location through which a shipment moves at some point between origin and destination. It can also be a carrier's break-bulk terminal or rehandling location. Also known as "intermediate point" and "intermediate port."

"Loss" means disappearance of cargo under circumstances where the cause cannot be defined.

"Manifest" means tabulation of waybills on the loaded vehicle. Often used by checkers as a check sheet when loading and unloading to verify the count.

"Order notify" means a shipment is consigned to order of the shipper, with instructions to notify another party of the arrival of the freight who can claim the shipment by surrendering the original "bill of lading." Also known as "sight draft."

"Origin terminal" means the terminal at which the shipment begins its travel to destination. Also known as "origin port."

"O. S. & D." means over, short, and damaged cargo.

"Overage" means a cargo shipment that is not covered by a "bill of lading" or "waybill."

"Pilferage" means theft of cargo in small amounts.

"Proof of delivery" means a request by shipper or consignee for proof of delivery, requesting name, date and exceptions.

"Seal procedure" means an internal procedure detailing company practices in seal application and removal.

"Security" means human or mechanical protection for cargo shipments.

"Shortage" means a shipment that is incomplete as compared with its description on the "bill of lading" or "waybill."

"S.L. & C." means shipper's load and count.

"Theft" means larcency or unlawfully taking goods of another without force.

"Tracer" means an internal inquiry between terminals to determine location or status of a shipment.

"Traffic" means goods moved by a transportation carrier. Also known as "cargo" or "freight."

"Waybill" means a document prepared from a "bill of lading" that accompanies shipment from origin to destination. Also known as "freight bill."

SUBPART B—ELEMENTS OF A SYSTEM

Sec. 101–4.11 *General.* An effective cargo loss reporting system must contain certain elements for successful implementation by employees and management. This subpart sets forth the minimal elements of such a system.

Sec. 101–4.13 *Procedures.* Detailed procedures for identifying and handling over, short, and damage cargo should be prepared by each carrier's management office and placed in terminals for reference, guidance, and training of all personnel involved in the cargo movement.

Sec. 101–4.15 *Training.* (a) Employees should have knowledge of the operating authority and traffic patterns of the carrier. This includes terminal locations, points served, service restrictions and exceptions, and average service schedule to all points.

(b) Drivers, dock workers and others involved with the traffic should have knowledge of customer freight movements, commodities shipped and peculiarities of specific customers.

(c) Employees should have full knowledge of the loss reporting system and the company's claim prevention program.

(d) All supervisory and management personnel should be involved in the training and fully understand the loss reporting system, how it functions, its objectives, the mechanics thereof, and who to contact in making the system work.

Sec. 101–4.17 *Management Review and Analysis.* (a) Reports in appropriate detail from the Cargo Loss Reporting System should be reviewed by the following: (1) General management, (2) security officers, (3) claims managers, (4) directors of operations, and (5) terminal managers.

(b) The cargo loss data should form the basis for reports on cargo claims which are or may be required by a regulatory agency.

(c) Reports should be analysed to pinpoint needed improvements in the claims prevention program.

SUBPART C—SYSTEM ORGANIZATION, GUIDELINES AND PROCEDURES

Sec. 101-4.21 *General.* (a) The cargo loss reporting system is intended to be responsive to management in the claims prevention program.

(b) The system should provide the most effective means and times to report all discrepancies in shipments to minimize claims exposure, and to provide better service to the customer.

(c) The reports generated by the system will serve as information to the claims department for denial or approval of claims presented by customers.

Sec. 101-4.23 *Organization.* (a) A central office to serve as the clearinghouse for all reports of shipment discrepancies should be established preferably at the corporate or company headquarters.

(b) This central office should be the focal point for all reports of overages, shortages, and damages and is responsible for: (1) Clearing reports on discrepancies; (2) matching overages and shortages; (3) issuing disposition instructions to terminals; and (4) developing advisory instructions for terminals with special problems.

(c) The central office should be in the claims department with direct communication with all terminals by means of teletype or telephone.

Sec. 101-4.25 *Guidelines.* (a) The loss reporting procedures should be implemented immediately upon discovery of an overage, shortage, or damage in shipment.

(b) The reports of an overage, shortage, or damage should included information defining who, what, when, where and how.

(c) Effectiveness of the procedures depends on detailed facts and prompt action.

(d) When a shortage is discovered at a terminal, usually one of the following errors has occurred:

(1) A billing error was made.

(2) Driver failed to pick up the entire shipment.

(3) A theft occurred from the pickup unit enroute to the terminal.

(4) The freight was loaded on the wrong unit at the shipper's dock.

(5) Another carrier picked up the freight in error.

(e) Action to be taken when such shortages are discovered:

(1) Check for billing or typographical error on bill of lading.

(2) Review with checker and crew that unloaded pickup unit.

(3) Check dock area for the missing freight.

(4) Interview the pickup driver promptly, by telephone if necessary, for his recollection of facts surrounding pickup and his count.

(5) Contact the shipper for possible error in his billing and have him recheck his dock for the missing freight. Obtain names of other carriers who made pick ups that day at his dock.

(6) Call other carriers and ask them to check for the missing freight.

(7) Check with the consignee to determine if he received the freight via another carrier.

(8) Advise the central clearing office and other terminals of the shortage with a full description.

(f) Other actions that should be taken:

(1) If shortage was part of a shipment, move the balance to destination with accompanying shortage report. Do not hold up the freight.

(2) If shortage is a complete shipment, a report should be prepared immediately for the central clearing office.

(3) If theft is indicated, notify all appropriate law enforcement authorities.

(4) Made a daily check for the missing freight with other terminals for the next five workdays.

(5) If the missing freight is located as a complete shipment, ship it promptly to destination on original waybill, free-astray bill or forced billing, depending on curcumstances.

(6) If the recovered freight is a part shipment, and the balance of the shipment has already moved to destination, prepare a free-astray bill and move the freight to destination promptly for final delivery.

(7) If the shortage is from an interline carrier, a signed and dated exception should be noted by the checker on connecting carriers freight bill.

(8) If the shortage is noted at an intermediate terminal, it should be recorded by the checker who should notify his supervisor. The central clearing office should be notified as well as the original and destination terminal.

(g) Copies of all over, short, and damage reports should be sent to the central clearing office where records and statistics should be compiled from each day's receipts, detailing all pertinent facts regarding each incident. Such facts should serve to furnish the carrier's management with facts and figures to formulate an improved claim prevention program.

(h) The central clearing office should maintain a daily follow-up with terminals on outstanding shortages and other omissions, thereby encouraging the terminals to intensify the search for facts to close out those files.

(i) When discrepancies are found and reported, immediate action should commence to correct the cause or causes.

(j) A daily schedule should be established for reporting all shortages and overages. Each carrier, based on experience, length of haul, and other factors should establish a timeframe within which discrepancies are reported to the central office and to other terminals to clear them and for a match-up. The report on losses should contain the following information:

(1) Name of Shipper;
(2) Name of Consignee;
(3) Waybill number;
(4) Date of shipment;
(5) Commodity;
(6) Weight;
(7) Type of shipment (container, truckload, pallet, etc.);
(8) Part missing (in shortage shipment);
(9) Part damaged;
(10) C.O.D. or order notify;
(11) Prepaid/collect;
(12) Where checked and by whom;
(13) How many times handled;
(14) Type loss (theft/hijack/pilferage/unknown) and
(15) Location where loss was detected.

(k) Any failure of the system in reporting losses should be investigated to determine and institute corrective measures.

(l) Prompt investigation of distressed freight and immediate reporting to the central control is essential to curtail cargo loss claims. This enhances the opportunity for correction and recovery before the audit trail becomes obliterated.

(m) Liaison should be established with all law enforcement agencies for help as needed. All theft losses and break-ins or attempted break-ins of facilities should be reported to these agencies.

(n) Shipments found without identification should be segregated and placed in the security cage while a search is made by an authorized person for packing slips or invoices to determine ownership. If identification is made, the freight should be recoopered and proper marking should be applied to each shipping container for prompt movement to destination.

(o) Overages found in the carrier's terminals should be reported in the same manner as shortages, for an overage can well mean a shortage elsewhere.

(p) All damaged freight should be reported to the central office. Local terminals should recooper such freight promptly to prevent further damage. Dry freight containers (cartons, bags, etc.) should be securely recoopered with sealing tape, banding wire, or other material to prevent further loss of contents or further damage. Waybills should be marked to indicate that shipment has been damaged.

(q) Each carrier should have printed forms for all reports in a format best suited to its needs for recording all types of discrepancies. The data content of the form should be tailored to its loss reporting system so that information can be retrieved.

(r) The carrier should issue advisory bulletins as needed to all terminals on specific problems or situations that arise. Changes in the existing Loss Reporting System should be made as necessary.

Sec. 101–4.27 *Procedure.* (a) A comprehensive over, short, and damage manual should be prepared and maintained based on the guidelines in section 85–4.25 of this subpart.

(b) An employee at each terminal should be designated the O. S. & D. clerk. Such person should be experienced in freight, movement, company routes, customer identify, commodities shipped, all movements of specialized cargoes, and high-risk movements. The O. S. & D. clerk should also possess a knowledge of claims handling, cargo claims prevention procedures, cargo security, packaging required by tariffs, recoopering practices, customer service, tracing, and related activities. He should be able to detect and correct flaws in handling and checking procedures, security measures and identification of problems relating to cargo claims prevention.

(c) The O. S. & D. clerk, who may be the terminal's Claims Prevention Manager, should be knowledgeable enough to judge when security has been breached and advise management, who in turn should call in law enforcement personnel.

(d) A daily inventory should be taken of freight docks to detect over and damaged freight. Such discoveries should be taken to recoop any damaged shipments, segregating those that are likely to damage other cargo, and to provide security for high-value cargo. The O. S. & D. Clerk and the Tracer Clerk should maintain close coordination to expedite delivery of overages.

(e) A centralized reporting procedure for O. S. & D.'s should be established for the central office to receive reports of all discrepancies from all locations, both verbal and written. This will enable that office, along with terminal help, to match up shortages, clear other discrepancies, and provide for disposition of O. S. & D. freight.

(f) The central office should have final authority in advising terminals on disposition of shipments involved in discrepancies and possible claims. This insures that all overages are promptly forwarded to proper destination with bills to cover until they can be matched up with proper billing at destination. Shortages should be given preferred attention, since they represent the single greatest dollar loss to a carrier.

(g) The central office should establish daily reports to account statistically for O. S. & D. activity and provide management with information to reflect error experience each day. High O. S. & D. activity is a sign

of operational problems and a forerunner to severity in cargo loss claims.

(h) Daily written records of all events relating to O. S. & D.'s must be maintained and be part of the carrier's files and available for inspection by the *claims* department as needed.

(i) The central office should maintain a cross-reference file of O. S. & D.'s that is continually updated for accurate reference. It should be posted and purged daily. It is a source of reference for terminals seeking information on outstanding O. S. & D. items, for tracer information, and other O. S. & D. information. It also serves as the source for daily trends.

(j) The central office should compile discrepancy data on shippers, such as failure to mark shipments properly, and the use of poor quality containers. Such discrepancies should be called to the shipper's attention for correction.

(k) A daily conference call among terminals on the communications network should be established, preferably at an hour when telephone traffic is light and most of the inbound traffic is out for delivery. This provides the best opportunity to have a clear picture of the day's discrepancies. This call should be monitored by the central office since it provides information to and about all terminals.

(l) When teletype is used in lieu of telephone, messages should be short and meaningful, delivered on receipt to the O. S. & D. clerk and other addresses, and acted upon promptly.

Sec. 101-4.29 *Training.* (a) Training sessions should be held at each terminal location for all personnel in relation to their participation in the loss reporting procedures. Office, dock, and driving employees as well as management should participate in order to be acquainted fully with the carrier's practices involving O. S. & D.'s and reporting procedures.

(b) Personnel trained in the Loss Reporting System must of necessity be knowledgeable of the carriers's physical operations, routings, points served and terminal locations, as well as the care and handling of specialized cargo, hazardous materials, and high-risk cargo.

Sec. 101-4.31 *Review and Analysis.* (a) The Loss Reporting System's explicit purpose is loss prevention through intensified management of freight handling activities. Information developed in the Loss Reporting System will assist management in identifying problem areas within the system, and prompt corrective action.

(b) Periodic reports should indicate trends, problem areas, problem freight, problem customers, and problem employees and proposed corrective action. They will identify theft-prone areas and commodities.

(c) The report should advise management of the relationship of O. S. & D.'s to cargo claims filed, O. S. & D.'s to shortages never recovered, and O. S. & D.'s to claims never filed, billing errors, checker errors, and causes previously unknown or ignored.

(d) The report will also furnish data on other matters such as:

(1) Frequency of billing errors;

(2) Errors on S. L. & C. trailers at shipper's dock, where drivers signing for loads do not count the freight; and

(3) Packaging problems on S. L. & C.

(e) The report should also:

(1) Identify geographic areas of loss such as large distribution centers, high-value cargo shippers and receivers, and dangerous and hazardous material shipment problems;

(2) Provide data on frequency of shipments picked up that lack proper or complete address which prevent delivery or seriously delay shipment and cost carrier time and money in determining the correct identification; and

(3) Identify shipments pickup up lacking any markings which must be delayed until somewone with proper authority opens cartons and checks for identification in the form of packing slips, invoices, or advertising.

(f) The report can provide data on shippers who should unitize their small carton shipments. Small containers are easily lost, stolen, or damaged when shipped loose. These multiple small pieces are costly to the carrier in extra labor as well as claims exposure. Unitizing can reduce carrier's handling cost and protect contents of shipment from loss and damage.

(g) A periodic review of the Loss Reporting System and its results should be done by management to determine:

(1) Its effectiveness, and

(2) Methods for improvement.

[42 FR 45800, Sept. 12, 1977. Redesignated by Amdts. 85-1, and 101-1, 43 FR 43305, Sept. 25, 1978]

PART 101-5—PILFERABLE HIGH-VALUE OR SENSITIVE CARGO TRANSIT PROCEDURES

SUBPART A—GENERAL

SUBPART B—ROUTING AND COMMUNICATION

Sec.

SUBPART C—OPERATING PROCEDURES

AUTHORITY: Sec. 9(c)(1), Department of Transportation Act (80 Stat. 944, 49 U.S.C. 1657(e)(1)), E.O. 11836 (3A CFR 123. Comp. (1975)), and sec. 101.3 of the Regulations of the Office of the Secretary of Transportation (49 CFR 101-3).

SUBPART A—GENERAL

SEC. 101-5.1 *Purpose.* (a) The purpose of this part is to set forth special transit procedures designed to protect high-value or sensitive cargo against theft and pilferage.

(b) The provisions herein are general and each may not apply to every transportation mode.

SEC. 101-5.3 *Application.* The guidelines presented herein apply equally to high-value or sensitive cargo in full load trailers/containers/rail cars moving in line haul and in less than full load shipments. Compliance with this advisory standard is voluntary and not mandatory. This standard does not repeal or modify any statutory requirement or regulatory authority vested in any Federal, State or local governmental body.

SEC. 101-5.5 *Definitions.* As used in this part:

"High-value cargo" means cargo which because of its monetary value, utility, desirability, or history of frequent theft requires greater protection than other commodities normally handled in the transportation facility. In addition, it includes commodities which are attractive, pilferable and highly salable, such as clothing, jewelry, and alcoholic beverages.

"Sensitive cargo" means cargo which because of its strategic value or potentially hazardous nature warrants greater security protection and care than other commodities normally handled in the transportation facility. Such sensitive cargo, if lost, could constitute a threat to law and order or to the safety and tranquility of the general public.

SUBPART B—ROUTING AND COMMUNICATION

SEC. 101-5.11 *General.* Routing and communications should be carefully planned for high-value or sensitive shipments. Written instructions to drivers would eliminate the possibility of a breakdown in personal communications or misunderstandings.

SEC. 101-5.13 *Routes.* (a) Whenever possible, travel should be restricted to limited access highways, turnpikes, freeways, etc.

(b) Unnecessary stops should be avoided. The shipment is most vulnerable when stopped.

(c) Trailers, containers or rail cars should be locked and protective devices activated.

(d) Estimated arrival times and delays should be expeditiously communicated to destination stations.

SEC. 101-5.15 *Communication.* (a) Where radios are available on local delivery vehicles, the route should be designated, and scheduled radio contact between the dispatcher and the vehicle should be maintained.

(b) For pickup or delivery vehicles without radio, the driver should telephone the dispatcher when leaving the shipper or arriving at the consignee, as appropriate. The dispatcher should notify the police if the driver does not contact him within the scheduled or reasonable time.

SEC. 101-5.17 *Escorts.* In cases where extremely high-value or sensitive cargo is transported, an escort should be used especially in areas which are high-risk or shipment is highly vulnerable. The escort should have radio communication with a central station. Any use of armed escorts must be in conformity with laws governing the use of firearms and armed escorts.

SUBPART C—OPERATING PROCEDURES

SEC. 101-5.21 *General.* The general details for high-value or sensitive cargo shipments should be standard operating procedures.

(a) To facilitate planning of necessary or special procedures, details of quantity, value, destination, etc., should be ascertained when initial pickup is arranged.

(b) High security padlocks should be provided on all pickup and delivery trucks.

(c) The dispatcher should know the identity of the shipper and consignee of each high-value or sensitive cargo and coordinate pickup and delivery with each.

(d) The company's operating procedures for transporting high-value or sensitive shipments should be published and maintained in each vehicle and at all loading terminals. The procedures should be readily accessible for use by drivers, shippers, consignees and dispatchers.

SEC. 101-5.23 *Delivery.* Every attempt should be made to have the load arrive at the local terminal for same-day delivery. This is extremely important in high-crime areas where cargo may be vulnerable in terminals or railyards.

SEC. 101-5.25 *Seals.* (a) Seal Accountability and Procedures are covered in Part 101-1 of this appendix.

(b) The use of security type seals is highly recommended. As a minimum, use security wire twist in conjunction with nonsecurity type seals.

(c) The serial number of a seal applied at the shipper's facility or the terminal should be recorded on the bill of lading and the manifest.

(d) The condition of the seal and its serial number should be checked upon entering and leaving each terminal or facility. The seal should also be checked by the driver after any other stops, and by railroad personnel on interchange of rail cars.

SEC. 101-5.27 *Physical security.* (a) Trailers, containers and rail car door hasps should be secured with a lock, wire or cable to deter the casual pilferer and delay more persistent thieves. Cable or wire twisted and secured through the safety latch, to be cut at destination, has proven to be an effective preventive measure.

(b) Door bolts, especially those on the locking bar and latch, should be peened or welded.

(c) Motion alarms are available commercially. These can be attached to trailers, containers and rail cars when parked to signal attempts at access or movement.

SEC. 101-5.29 *Terminal security.* (a) High-value or sensitive cargo temporarily placed on the dock or spotted in a railyard should be located in a special area which affords good visibility from the terminal office and should be checked frequently.

(b) Kingpin-locked trailers can be parked door-to-door to block access to other high-value or sensitive cargo. In the absence of kingpin locks, security can be achieved by hooking the tractor to the trailer, removing the ignition key and locking the tractor.

(c) Unauthorized persons should not be allowed entry into the terminal area.

(d) When company identification badges are used, they should be worn at all times by employees.

(e) Procedures should be established to have the count certified by drivers and loaders. Any exceptions should be reported immediately to the supervisor.

SEC. 101-5.31 *Security crib.* (a) High-value or sensitive cargo which cannot be outloaded immediately should be placed in a security crib or cage, in accordance with Part 101-2 of this Appendix, "High-Value Commodity Storage."

(b) The following should be recorded:

(1) The count and the name of the person doing the counting;

(2) The condition of the shipment; and

(3) The fact that the shipment was intact when placed in the crib.

(c) Cargo should only be removed from the crib when scheduled for immediate placement in a delivery or line unit. The count and condition should be certified by a supervisor.

SEC. 101-5.33 *Supervisor responsibilities.* (a) An effective loss control program requires participation by all supervisory personnel.

(b) A supervisor should inspect all bills of lading from incoming pickups promptly to identify high-value or sensitive items and provide necessary security.

(c) A supervisor should verify the count and condition when cargo is stripped from pickup or interline unit and direct the movement into the line trailer, container or rail car.

(d) Any overages, shortages or damages should be reported in accordance with Part 100-4 of this Appendix, "Cargo Loss Reporting System and Procedures."

(e) High-value or sensitive cargo should be loaded in the front end of the trailer, container or rail car. The supervisor should monitor the loading to ensure that the commodity is "buried" and to provide necessary documentation for accountability. Adherence to safe loading procedures is necessary to avoid overloading the front end or creation of unsafe conditions.

NOTE: OST Docket No. 32, containing all previous cargo security advisory standards and pertinent comments thereto, has been transferred from the Office of the Secretary to the Research and Special Programs Administration and is now available to the public in the Office of the Chief Counsel, Research and Special Programs Administration, Room 6222, Trans Point Building, 2100 Second Street SW., Washington, D.C. 20590. All future advisory standards will be published under RSP Docket No. 1.

[43 FR 24693, June 7, 1978. Redesignated by Amdts. 85-1 and 101-1, 43 FR 43305, Sept. 25, 1978]

SUBCHAPTER B—HAZARDOUS MATERIALS TRANSPORTATION AND PIPELINE SAFETY

PART 106—RULEMAKING PROCEDURES

Subpart A—General

Subpart B—Procedures for Adoption of Rules

AUTHORITY: Sec. 902(h)(1), Pub. L. 85-726, 72 Stat. 784 (49 U.S.C. 1472(h)(1)); sec. 3, Pub. L. 90-481, 82 Stat. 720 (49 U.S.C. 1672); secs. 104, 105, 109, Pub. L. 93-633, 88 Stat. 2157 (49 U.S.C. app. 1803, 1804, 1808); sec. 21(a), Pub. L. 89-670 (49 U.S.C. 1653, 1657(e)); sec. 203, Pub. L. 96-126, 93 Stat. 1004 (49 U.S.C. 2002).

SOURCE: 40 FR 31768, July 29, 1975, unless otherwise noted. Redesignated by Amdt. 102-1, and Amdt. 106-1, 43 FR 43306, Sept. 25, 1978.

EDITORIAL NOTE: Nomenclature changes to Part 106 appear at 43 FR 43307, Sept. 25, 1978 (Amdts. 102-1, and 106-1) and at 50 FR 45729, Nov. 1, 1985.

Subpart A—General

§ 106.1 Scope.

This part prescribes general rulemaking procedures for the issue, amendment, and repeal of regulations of the Research and Special Programs Administration of the Department of Transportation.

§ 106.3 Delegations.

For the purposes of this part, "Administrator" means the Administrator, Research and Special Programs Administration or any of the following to whom he has delegated authority to conduct rulemaking proceedings:

(a) Director, Office of Hazardous Materials Transportation.

(b) Director, Office of Pipeline Safety.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e))

[40 FR 31768, July 29, 1975. Redesignated by Amdts. 102-1 and 106-1, 43 FR 43306, Sept. 25, 1978, and amended by Amdt. 106-2, 43 FR 48642, Oct. 19, 1978]

§ 106.5 Regulatory dockets.

(a) Information and data considered relevant by the Administrator relating to rulemaking actions, including notices of proposed rulemaking; comments received in response to notices; petitions for rulemaking and reconsideration; denials of petitions for rulemaking and reconsideration; records of additional rulemaking proceedings under § 106.25; and final regulations are maintained by the Research and Special Programs Administration at 400 7th Street, SW, Washington, D.C. 20590.

(b) Any person may examine any docketed material at the offices of the Research and Special Programs Administration at any time during regular business hours after the docket is established, except material which the Administrator determines should be withheld from public disclosure under applicable provisions of any statute administered by the Administrator and section 552(b) of Title 5, United States Code, and may obtain a copy of it upon payment of a fee.

[40 FR 31768, July 29, 1975. Redesignated by Amdts. 102-1 and 106-1, 43 FR 43306, Sept. 25, 1978, and amended by Amdt. 106-3, 45 FR 81571, Dec. 11, 1980]

§ 106.7 Records.

Records of the Research and Special Programs Administration relating to rulemaking proceedings are available for inspection as provided in section 552(b) of Title 5, United States Code, and Part 7 of the Regulations of the Office of the Secretary of Transportation (Part 7 of this title).

§ 106.9 Where to file petitions.

Petitions for extension of time to comment submitted under § 106.19, petitions for hearings submitted under § 106.27, petitions for rulemaking submitted under § 106.31, and petitions for reconsideration submitted under § 106.35 must be submitted to: Administrator, Research and Special Programs Administration, U.S. Department of Transportation, 400 7th Street, SW, Washington, D.C. 20590.

[40 FR 31768, July 29, 1975. Redesignated by Amdts. 102-1 and 106-1, 43 FR 43306, Sept. 25, 1978, and amended by Amdt. 106-3, 45 FR 81571, Dec. 11, 1980]

Subpart B—Procedures for Adoption of Rules

§ 106.11 General.

Unless the Administrator, for good cause, finds that notice is impracticable, unnecessary, or contrary to the public interest, and incorporates that finding and a brief statement of the reasons for it in the rule, a notice of proposed rulemaking is issued and interested persons are invited to participate in the rulemaking proceedings with respect to each substantive rule.

§ 106.13 Initiation of rulemaking.

The Administrator initiates rulemaking on his own motion. However, in so doing, he may, in his discretion, consider the recommendations of other agencies of the United States or of other interested persons including those of any technical advisory body established by statute for that purpose.

§ 106.15 Contents of notices of proposed rulemaking.

(a) Each notice of proposed rulemaking is published in the FEDERAL REGISTER, unless all persons subject to it are named and are personally served with a copy of it.

(b) Each notice, whether published in the FEDERAL REGISTER or personally served, includes:

(1) A statement of the time, place, and nature of the proposed rulemaking proceeding;

(2) A reference to the authority under which it is issued;

(3) A description of the subjects and issues involved or the substance and terms of the proposed regulation;

(4) A statement of the time within which written comments must be submitted; and

(5) A statement of how and to what extent interested persons may participate in the proceeding.

§ 106.17 Participation by interested persons.

(a) Any interested person may participate in rulemaking proceedings by submitting comments in writing containing information, views or arguments.

(b) In his discretion, the Administrator may invite any interested person to participate in the rulemaking proceedings described in § 106.25.

(c) For the purposes of this part, an interested person includes any Federal or State government agency or any political subdivision of a State (as defined in § 107.201(b) of this subchapter).

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[40 FR 31768, July 29, 1975. Redesignated by Amdt. 102-1, and Amdt. 106-1, 43 FR 43306, Sept. 25, 1978, and amended by Amdt. 106-4, 48 FR 2651, Jan. 20, 1983]

§ 106.19 Petitions for extension of time to comment.

A petition for extension of the time to submit comments must be received not later than 10 days before expiration of the time stated in the notice. It is requested, but not required, that three copies be submitted. The filing of the petition does not automatically extend the time for petitioner's comments. A petition is granted only if the petitioner shows good cause for the extension, and if the extension is consistent with the public interest. If an

extension is granted, it is granted to all persons, and it is published in the FEDERAL REGISTER.

§ 106.21 Contents of written comments.

All written comments must be in English. It is requested, but not required, that five copies be submitted. Any interested person must submit as part of his written comments all the material that he considers relevant to any statement of fact made by him. Incorporation of material by reference is to be avoided. However, if such incorporation is necessary, the incorporated material shall be identified with respect to document and page.

§ 106.23 Consideration of comments received.

All timely comments and the recommendations of any technical advisory body established by statute for the purpose of reviewing the proposed rule concerned are considered before final action is taken on a rulemaking proposal. Late filed comments are considered so far as practicable.

§ 106.25 Additional rulemaking proceedings.

The Administrator may initiate any further rulemaking proceedings that he finds necessary or desirable. For example, interested persons may be invited to make oral arguments, to participate in conferences between the Administrator or his representative and interested persons at which minutes of the conference are kept, to appear at informal hearings presided over by officials designated by the Administrator at which a transcript of minutes are kept, or participate in any other proceeding to assure informed administrative action and to protect the public interest.

§ 106.27 Hearings.

(a) If a notice of proposed rulemaking does not provide for a hearing, any interested person may petition the Administrator for an informal hearing. The petition must be received by the Administrator not later than 20 days before expiration of the time stated in the notice. The filing of the petition does not automatically result in the scheduling of a hearing. A petition is granted only if the petitioner shows good cause for a hearing. If a petition for a hearing is granted, notice of the hearing is published in the FEDERAL REGISTER.

(b) Sections 556 and 557 of Title 5, United States Code, do not apply to hearings held under this part. Unless otherwise specified, hearings held under this part are informal, nonadversary, fact-finding proceedings, at which there are not formal pleadings or adverse parties. Any regulation issued in a case in which an informal hearing is held is not necessarily based exclusively on the record of the hearing.

(c) The Administrator designates a representative to conduct any hearing held under this part. The Chief Counsel designates a member of his staff to serve as legal officer at the hearing.

§ 106.29 Adoption of final rules.

Final rules are prepared by representatives of the office concerned and the Office of the Chief Counsel. The regulation is then submitted to the Administrator for his consideration. If the Administrator adopts the regulation, it is published in the FEDERAL REGISTER, unless all persons subject to it are named and are personally served with a copy of it.

§ 106.31 Petitions for rulemaking.

(a) Any interested person may petition the Administrator to establish, amend, or repeal a regulation.

(b) Each petition filed under this section must:

(1) Set forth the text or substance of the regulation or amendment proposed, or specify the rule that the petitioner seeks to have repealed, as the case may be;

(2) Explain the interest of the petitioner in the action requested; and

(3) Contain any information and arguments available to the petitioner to support the action sought.

§ 106.33 Processing of petition.

(a) *General.* Unless the Administrator otherwise specifies, no public hearing, argument, or other proceeding is held directly on a petition before its disposition under this section.

(b) *Grants.* If the Administrator determines that the petition contains adequate justification, he initiates rulemaking action under this Subpart B.

(c) *Denials.* If the Administrator determines that the petition does not justify rulemaking, he denies the petition.

(d) *Notification.* Whenever the Administrator determines that a petition should be granted or denied, the Office of the Chief Counsel prepares a notice of that grant or denial for issuance to the petitioner, and the Administrator issues it to the petitioner.

§ 106.35 Petitions for reconsideration.

(a) Any interested person may petition the Administrator for reconsideration of any regulation issued under this part. It is requested, but not required, that three copies be submitted. The petition must be received not later than 30 days after publication of the rule in the FEDERAL REGISTER. Petitions filed after that time will be considered as petitions filed under § 106.31. The petition must contain a brief statement of the complaint and an explanation as to why compliance with the rule is not practicable, is unreasonable, or is not in the public interest.

(b) If the petitioner requests the consideration of additional facts, he must state the reason they were not presented to the Administrator within the prescribed time.

(c) The Administrator does not consider repetitious petitions.

(d) Unless the Administrator otherwise provides, the filing of a petition under this section does not stay the effectiveness of the rule.

§ 106.37 Proceedings on petitions for reconsideration.

(a) The Administrator may grant or deny, in whole or in part, any petition for reconsideration without further proceedings. In the event he determines to reconsider any regulation he may issue a final decision on reconsideration without further proceedings, or he may provide such opportunity to submit comment or information and data as he deems appropriate. Whenever the Administrator determines that a petition should be granted or denied, the Office of Chief Counsel prepares a notice of the grant or denial of a petition for reconsideration, for issuance to the petitioner, and the Administrator issues it to the petitioner. The Administrator may consolidate petitions relating to the same rules.

(b) It is the policy of the Administrator to issue notice of the action taken on a petition for reconsideration within 90 days after the date on which the regulation in question is published in the FEDERAL REGISTER, unless it is found impracticable to take action within that time. In cases where it is so found and the delay beyond that period is expected to be substantial, notice of that fact and the date by which it is expected that action will be taken is issued to the petitioner and published in the FEDERAL REGISTER.

APPENDIX A

Pursuant to § 106.3, the following officials of the Research and Special Programs Administration are authorized to conduct rulemaking proceedings under this part, as specified in this appendix.

(a) The Director, Office of Hazardous Materials Transportation is authorized to conduct all rulemaking proceedings, except the issuance of final rules and the grant or denial of petitions for reconsideration, under:

(1) [Reserved]

(2) Section 902(h)(1) of the Federal Aviation Act, as amended, 49 U.S.C. 1472(h)(1); and

(3) The Hazardous Materials Transportation Act, 49 U.S.C. 1801 et seq., except to the extent it relates to: (i) Ship's stores or supplies, (ii) the bulk transportation of hazardous materials which are loaded or carried onboard a vessel without benefit of containers or labels, and received and handled by the vessel without mark or count, or (iii) pipelines.

(b) The Director, Office of Pipeline Safety is authorized to conduct all rulemaking proceedings, except the issuance of final rules and the grant or denial of petitions for reconsideration, under:

(1) The Hazardous Liquid Pipeline Safety Act of 1979 (Title II of Pub. L. 96-129, 93 Stat. 1003, 49 U.S.C. 2001 et seq.);

(2) The Natural Gas Pipeline Safety Act of 1968, as amended, 49 U.S.C. 1671 et seq.;

(3) Section 21(a) of the Deepwater Port Act of 1974, 33 U.S.C. 1520(a).

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53(e))

[Amdt. 106-1, 43 FR 43307, Sept. 25, 1978; 43 FR 45366, Oct. 2, 1978; Amdt. 106-2, 43 FR 48642, Oct. 19, 1978; Amdt. 106-1, 45 FR 14577, Mar. 6, 1980; 50 FR 45729, Nov. 1, 1985; Amdt. 106-5, 51 FR 5969, Feb. 18, 1986; Amdt. 106-6, 51 FR 34986, Oct. 1, 1986]

PART 107—HAZARDOUS MATERIALS PROGRAM PROCEDURES

Subpart A—General Provisions

Subpart B—Exemptions

Subpart C—Preemption

Subpart D—Enforcement

Subpart E—Designation of Approval and Certification Agencies

AUTHORITY: 49 App. U.S.C. 1421(c); 49 App. U.S.C. 1802, 1806, 1808-1811; 49 CFR 1.45 and 1.53 and App. A of Part 1, Pub. L. 89-670 (49 U.S.C. 1653(d), 1655).

SOURCE: 40 FR 48470, Oct. 15, 1975, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to Part 107 appear at 43 FR 43307, Sept. 25, 1978 (Amdt. 107-4), 43 FR 48642, Oct. 19, 1978 (Amdt. 107-5) and at 50 FR 45729, Nov. 1, 1985.

Subpart A—General Provisions

§ 107.1 Purpose and scope.

(a) This part prescribes procedures utilized by the Research and Special Programs Administration, the Office of Hazardous Materials Transportation and the Office of Chief Counsel in carrying out their duties under the laws pertaining to the transportation of hazardous materials.

(b) This subpart defines certain terms and prescribes procedures that are applicable to each proceeding described in this part.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-4, 43 FR 43307, Sept. 25, 1978]

§ 107.3 Definitions.

As used in this part:

"Act" means the Hazardous Materials Transportation Act.

"Approval Agency" means an organization or a person designated by the RSPA to certify packagings as having been designed, manufactured, tested, modified, marked or maintained in compliance with applicable DOT regulations.

"Competent Authority" means a national agency responsible under its national law for the control or regulation of a particular aspect of the transportation of hazardous materials (dangerous goods). The term "Appropriate authority", as used in the ICAO Technical Instructions, has the same meaning as "Competent Authority". The Director, Office of Hazardous Materials Transportation, Research and Special Programs Administration, is the United States Competent Authority for purposes of this part.

"OHMT" means the Office of Hazardous Materials Transportation.

"Person" includes a corporation, company, association, firm, partnership, society, and joint stock company, joint venture, sole proprietorship, as well as any officer, director, owner or duly authorized representative of any such unit or an individual.

"Respondent" means a person upon whom the RSPA has served a notice of probable violation.

"State" means a State of the United States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, or Guam.

[Amdt. 107-3, 41 FR 38170, Sept. 9, 1976, as amended by Amdt. 107-4, 43 FR 43307, Sept. 25, 1978; Amdt. 107-5, 43 FR 48642, Oct. 19, 1978; Amdt. 107-8, 46 FR 9888, Jan. 29, 1981; Amdt. 107-12, 48 FR 53711, Nov. 29, 1983; 50 FR 45730, Nov. 1, 1985]

§ 107.5 Request for confidential treatment.

(a) If any person filing a document with the OHMT claims that some or all the information contained in the document is exempt from the mandatory public disclosure requirements of the Freedom of Information Act (5 U.S.C. 552 (1970)), is information referred to in 18 U.S.C. 1905 (1970), or is otherwise exempt by law from public disclosure, and if that person requests the OHMT not to disclose the information, that person shall file together with the documents a second copy of the document from which has been deleted the information for which confidential treatment is claimed. The person shall indicate in the original document that it is confidential or contains confidential information and may file a statement specifying the justification for which confidential treatment is claimed. If the person states that the information comes within the exception in 5 U.S.C. 552(b)(4) for trade secrets and commercial or financial information, that person must include a statement as to why the information is privileged or confidential. If the person filing a document does not submit a second copy of the document with the confidential information deleted, the OHMT may assume that there is no objection to public disclosure of the document in its entirety.

(b) The OHMT retains the right to make its own determination with regard to any claim of confidentiality. Notice of a decision by the OHMT to deny the claim, in whole or in part, and an opportunity to respond shall be given to a person claiming confidentiality of information no less than five days prior to its public disclosure.

§ 107.7 Service of process on non-residents of the United States.

(a) *Designation of agent for service.* When a person who is not a resident of the United States is required by this subchapter or Subchapter C of this chapter to designate a permanent resident of the United States as his agent upon whom service of process may be made for him and on his behalf, the agent may be an individual, a firm, or a domestic corporation. Any number of principals may designate the same person as agent. A designation is binding on a principal even if the designation is not in compliance with all the requirements of this section, until rejected by the OHMT. A designated agent may not assign performance of his functions under the designation to another person.

(b) *Form and contents of designation.* The designation shall:

(1) Be in writing and dated;

(2) Be made in the legal form required to make it valid and binding on the principal under the laws, corporate bylaws, or other requirements governing the making of the designation by the principal at the place and time where it is made and the person or persons signing the designation shall certify that it is so made;

(3) State the full legal name, principal name of business and mailing address of the principal;

(4) Provide that it remains in effect until withdrawn or replaced by the principal;

(5) State the legal name and mailing address of the agent; and

(6) Bear a declaration of acceptance duly signed by the designated agent.

(c) *Method of service.* Service of any process, notice, order, decision, or requirement of the OHMT may be made by registered or certified mail addressed to the agent with return receipt requested or in any other manner authorized by law. If service cannot be effected because the agent has died (or, if a firm or a corporation ceases to exist) or moved, or otherwise does not receive correctly addressed mail, service may be made by publication in the FEDERAL REGISTER.

[Amdt. 107-2, 41 FR 7509, Feb. 19, 1976]

§ 107.9 Public docket room.

There is established in the RSPA offices at 400 7th Street, SW., Washington, D.C., a public docket room in which there is available for public inspection and copying:

(a) Copies of notices of proposed rulemaking issued by the RSPA or its predecessor agency, including advance notices, together with the comments received thereon during rulemaking proceedings, copies of any related FEDERAL REGISTER notices, final rules, petitions for reconsideration, and decisions issued in response to petitions for reconsideration;

(b) Applications for exemptions from the Department of Transportation's regulations governing the transportation of hazardous materials, including supporting data, memoranda of any informal meetings with applicants, related FEDERAL REGISTER notices, comments received thereon during the public comment period and copies of decisions issued granting or denying applications for exemptions;

(c) Applications for inconsistency rulings and nonpreemption determinations under Subpart C of this part, together with the comments received thereon, related documents filed with the RSPA, copies of related FEDERAL REGISTER notices, and rulings, determinations and orders issued in response to those applications;

(d) Records of compliance order proceedings and copies of RSPA compliance orders;

(e) Appeals filed under this part and RSPA decisions issued in response to those appeals; and

(f) Such other information pertaining to the RSPA's hazardous materials program required by statute to be made available for public inspection and copying and any information which the RSPA determines should be made available to the public.

[Amdt. 107-3, 41 FR 38170, Sept. 9, 1976, as amended by Amdt. 107-8, 45 FR 81571, Dec. 11, 1980]

§ 107.11 Service.

(a) Each order, notice, or other document required to be served under this part shall be served personally or by

registered or certified mail, except as otherwise provided.

(b) Service upon a person's duly authorized representative constitutes service upon that person.

(c) Service by registered or certified mail is complete upon mailing. An official United States Postal Service receipt from the registered or certified mailing constitutes prima facie evidence of service.

[Amdt. 107-3, 41 FR 38170, Sept. 9, 1976]

§ 107.13 Subpoenas, witness fees.

(a) The Administrator, RSPA, the Chief Counsel, Research and Special Programs Administration, or the Official designated to preside over a hearing convened in accordance with this part, may sign and issue subpoenas either on his own initiative or, upon an adequate showing that the information sought will materially advance the proceeding, upon the request of any person participating in that proceeding.

(b) A subpoena may require the attendance of a witness, or the production of documentary or other tangible evidence in the possession or under the control of the person served, or both.

(c) A subpoena may be served personally by any person who is not an interested person and is not less than 18 years of age, or by certified or registered mail.

(d) Service of a subpoena upon the person named therein shall be made by delivering a copy of the subpoena to such person and by tendering the fees for one day's attendance and mileage as specified by paragraph (f) of this section. When a subpoena is issued at the instance of any officer or agency of the United States, fees and mileage need not be tendered at the time of service. Delivery of a copy of a subpoena and tender of the fees to a natural person may be made by handing them to the person, leaving them at his office with the person in charge thereof, leaving them at his dwelling place or usual place of abode with some person of suitable age and discretion then residing therein, by mailing them by registered or certified mail to him at his last known address, or by any method whereby actual notice is given to him and the fees are made available prior to the return date. When the person to be served is not a natural person, delivery of a copy of the subpoena and tender of the fees may be effected by handing them to a registered agent for service, or to any officer, director, or agent in charge of any office of the person, or by mailing them by registered or certified mail to that representative at his last known address or by any method whereby actual notice is given to the representative and the fees are made available prior to the return date.

(e) The original subpoena bearing a certificate of service shall be filed with the RSPA official having responsibility for the proceeding in connection with which the subpoena was issued.

(f) A witness subpoenaed by the RSPA shall be paid the same fees and mileage as would be paid to a witness in a proceeding in the district courts of the United States. The witness fees and mileage shall be paid by the person at whose instance the subpoena was issued.

(g) Notwithstanding the provisions of paragraph (f) of this section, and upon request, the witness fees and mileage may be paid by the RSPA if the RSPA official who issued the subpoena determines on the basis of good cause shown, that:

(1) The presence of the subpoenaed witness will materially advance the proceeding; and

(2) The person at whose instance the subpoena was issued would suffer a serious hardship if required to pay the witness fees and mileage.

(h) Any person to whom a subpoena is directed may apply no later than 10 days after service thereof, to the person who issued the subpoena to quash or modify it. The application shall contain a brief statement of the reasons relied upon in support of the action sought therein. The person who issued the subpoena may:

(1) Deny the application;

(2) Quash or modify the subpoena; or

(3) Condition denial of the application to quash or modify the subpoena upon the satisfaction of certain just and reasonable requirements. The denial may be summary.

(i) If there is a refusal to obey a subpoena served upon any person under the provisions of this section, the RSPA may request the Attorney General to seek the aid of the United States District Court for any District in which the person is found to compel that person, after notice, to appear and give testimony, or to appear and produce the subpoenaed documents before the RSPA, or both.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[Amdt. 107-3, 41 FR 38170, Sept. 9, 1976, as amended by Amdt. 107-11, 48 FR 2651, Jan. 20, 1983]

Subpart B—Exemptions

§ 107.101 Purpose and scope.

This subpart prescribes procedures by which persons who are subject to the requirements of this subchapter, Subchapter C of this chapter, 46 CFR Part 64 or Part 146 may obtain administrative relief therefrom on the basis of equivalent levels of safety or levels of safety consistent with the public interest and the policy of the Hazardous Materials Transportation Act.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-4, 43 FR 43308, Sept. 25, 1978]

§ 107.103 Application for exemption.

(a) Any person who is subject to the requirements of this subchapter, Subchapter C of this chapter, 46 CFR Part 64 or Part 146 may apply to the Director, OHMT, for an exemption from those requirements.

(b) Each application filed under this section for an exemption must:

(1) Be submitted in triplicate to: Office of Hazardous Materials Transportation, U.S. Department of Transportation, Washington, D.C. 20590, Attention: Exemptions Branch;

(2) Set forth the text or substance of the regulation from which the exemption is sought;

(3) State the name, address, and telephone number of the applicant;

(4) Include a detailed description of the proposal, including when appropriate, drawings, plans, calculations, procedures, test results, previous exemptions, approvals or permits, a list of specification containers, if any, to be used, a list of modified specification containers, if any, to be used, and a description of the modifications, and any other supporting information;

(5) State the chemical name, common name, hazard classification, form, quantity, properties, and characteristics of the material covered by the proposal, including composition and percentage (specified by volume or weight) of each chemical, if a solution or mixture;

(6) Describe all relevant shipping and accident experience;

(7) Specify the proposed mode of transportation, identify any increased risks that are likely to result if the exemption is granted, and specify the safety control measures which the applicant considers necessary or appropriate to compensate for those increased risks;

(8) Specify the proposed duration or describe the proposed schedule of events for which the exemption is sought;

(9) State why the applicant believes the proposal including any safety control measures specified by the applicant will achieve a level of safety which:

(i) Is at least equal to that specified in the regulation from which the exemption is sought, or

(ii) If the regulations do not contain a specified level of safety, will be consistent with the public interest and will adequately protect against the risks to life and property which are inherent in the transportation of hazardous materials in commerce;

(10) If the applicant seeks to have the application processed on a priority basis, set forth the supporting facts and reasons and

(11) If the applicant is not a resident of the United States, include a designation of a permanent resident of the United States as his agent for service of process in accordance with § 107.7.

(c) Unless the Director, OHMT, finds that there is good reason for priority processing of an application, each application is processed in the order in which it is received. To permit timely consideration, an application should be submitted at least 120 days before the requested effective date.

(d) If the applicant wishes to claim confidential treatment for any information contained in the application, the procedures set forth in § 107.5 apply.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-2, 41 FR 7509, Feb. 19, 1976; Amdt. 107-4, 43 FR 43308, Sept. 25, 1978]

§ 107.105 Application for renewal.

(a) Each application for the renewal of an exemption issued under this subpart must:

(1) Be submitted in triplicate to: Office of Hazardous Materials Transportation, U.S. Department of Transportation, Washington, D.C. 20590, Attention: Exemptions Branch;

(2) Identify the exemption for which a renewal is requested;

(3) State the name, address, and telephone number of the applicant;

(4) Include (i) a certification by the applicant that the descriptions, technical information and safety assessment submitted in the original application, or as may have been updated by any subsequent application for renewal, remain accurate and correct, or (ii) such amendments to the previously submitted descriptions, technical information and safety assessment as is necessary to update them and assure their accuracy and correctness;

(5) A statement describing all relevant shipping and all accident experience that has occurred in connection with the exemption since its issuance or most recent renewal or, if no accidents have been experienced, a certification to that effect. This statement must include the approximate number of shipments made or packages shipped, as the case may be, and the number of shipments or packages involved in any loss of contents, including loss by venting when transporting a compressed or cold temperature gas.

(b) To permit timely consideration, an application for renewal should be submitted at least 60 days before the expiration date of the exemption.

(c) If, at least 60 days prior to the expiration of an existing exemption of a continuing nature, the holder files an application for renewal which is complete and conforms with the requirements of this section, the exemption will not be considered to have expired until the application for renewal has been finally determined.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-4, 43 FR 43308, Sept. 25, 1978; Amdt. 107-15, 51 FR 34986, Oct. 1, 1986]

§ 107.107 Administrative review.

In the case of a written application for an exemption submitted as provided in § 107.103(b) or the renewal of an exemption submitted as provided in § 107.105, the Director, OHMT, reviews it to determine whether it is complete and conforms with the requirements of this subpart. This determination will be made within 30 days of the receipt of an exemption application and within 15 days of the receipt of a renewal application. If it is not returned to the applicant by the end of that period, it will be processed as provided in § 107.109. If an application is returned, the applicant will be informed in what respects the application is incomplete.

§ 107.109 Processing of application.

(a) After an application for an exemption or renewal of an exemption is determined to be complete, the Director, OHMT, dockets the application and publishes a notice in the FEDERAL REGISTER affording an opportunity for interested persons to comment. All comments received before the close of the comment period are considered before final action is taken on an application.

(b) No public hearing, argument, or other formal processing is held directly on an application filed under this subpart before its disposition under this section. However, during the processing of an application the Director, OHMT, may require the applicant to supply additional information.

(c) The Director, OHMT denies an application in accordance with the following:

(1) The application is denied if it does not contain adequate justification or if it contains any materially false or materially misleading statements, or fails to state a material fact.

(2) If the Director, OHMT denies an application under this paragraph, he notifies the applicant in writing of his

reason therefore and publishes notice of the denial in the FEDERAL REGISTER.

(d) If the Director, OHMT, determines that the application contains adequate justification, he grants it subject to the conditions set forth in Appendix B to this subpart and such other terms as he considers necessary, and notifies the applicant in writing. He also publishes in the FEDERAL REGISTER a notice of the grant.

(e) If the Director, OHMT, determines that an application concerns a matter of such general applicability and future effect as to warrant being made the subject of rule making, he may initiate rule making under Part 106 of this chapter in addition to or in lieu of granting or denying the application.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-8, 45 FR 81571, Dec. 11, 1980; Amdt. 107-11, 48 FR 2651, Jan. 20, 1983]

§ 107.111 Party to an exemption.

(a) Any person who is eligible to apply under § 107.103 for an exemption may apply to the Director, OHMT, to be made a party to an application filed under that section or § 107.105 or to an exemption or renewal granted under § 107.109(d).

(b) Each application filed under this section must:

(1) Be submitted to: Office of Hazardous Materials Transportation, U.S. Department of Transportation, Washington, D.C. 20590, Attention: Exemptions Branch;

(2) Identify the exemption application or exemption to which the applicant seeks to become a party;

(3) State the name, address and telephone number of the applicant and

(4) If the applicant is not a resident of the United States, include a designation of a permanent resident of the United States as his agent for service of process in accordance with § 107.7.

(c) The applicant becomes a party to an exemption application or exemption if the Director, OHMT, determines that:

(1) The applicant is a person who is eligible to apply under § 107.103 for an exemption; and

(2) The exemption application or exemption to which the applicant seeks to become a party concerns a matter of a continuing nature and does not depend upon information entitled to confidential treatment.

(d) The Director, OHMT, publishes in the FEDERAL REGISTER a notice of each application received, each initial determination made and each renewal granted under this section.

(e) A person who becomes a party to an exemption under this section is subject to terms of that exemption, including the expiration date stated therein. If a party to an exemption wishes to renew his status as a party to an exemption, the procedures set forth in §§ 107.105 through 107.109 with respect to an application for renewal of an exemption apply.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-1, 40 FR 56443, Dec. 3, 1975; Amdt. 107-2, 41 FR 7509, Feb. 19, 1976]

§ 107.113 Application for and processing of emergency exemption.

(a) Any person who is subject to the requirements of this subchapter, Subchapter C of this chapter, 46 CFR Part 64 or Part 146 who seeks an exemption from any of those requirements on the basis of an existing emergency shall apply for that exemption through the appropriate Department of Transportation official listed in Appendix A to this subpart.

(b) An application submitted under this section must include such supporting information with respect to each of the topics specified in § 107.103(b) (2) through (11) as the receiving Department of Transportation official considers necessary for processing the application.

(c) Upon receipt of all of the information necessary for processing the application, the receiving Department of Transportation official shall transmit to the Director, OHMT, by the most rapid available means of communication, his evaluation as to whether an emergency exists and his recommendations with respect to the conditions to be included in the exemption. If the Director, OHMT, determines that an emergency exists and that there is adequate justification for the

exemption, he grants the exemption subject to the applicable conditions set forth in Appendix B to this subpart and such other terms as he considers necessary, and immediately notifies the applicant. If the Director, OHMT, cannot determine that an emergency exists or determines that there is not adequate justification for the exemption, he immediately so notifies the applicant.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-1, 40 FR 56443, Dec. 3, 1975; Amdt. 107-2, 41 FR 7509, Feb. 19, 1976; Amdt. 107-4, 43 FR 43308, Sept. 25, 1978]

§ 107.115 Determination of existing emergency.

(a) The Director, OHMT, shall determine that an emergency exists if, on the basis of information submitted in the application and his own investigation, he finds that:

(1) Existing conditions require the hazardous material concerned to be transported in commerce for the protection of life or property (other than the hazardous material to be transported); and

(2) The protection of life or property to be provided by the hazardous material would not be possible if the application is processed on a routine basis.

(b) The Director, OHMT, may determine that an emergency exists if, on the basis of information submitted in the application, he finds that:

(1) Existing conditions require the hazardous material concerned to be transported in commerce to prevent or minimize serious economic loss; and

(2) The prevention or minimizing of serious economic loss to be provided by the hazardous material would not be possible if the application is processed on a routine basis.

(c) In determining what constitutes serious economic loss under paragraph (b) of this section, the Director, OHMT, considers the nature and extent of the expected loss.

§ 107.117 Withdrawal.

(a) An applicant may withdraw an application at any time prior to it being finally determined. When an application is withdrawn after publication of the notice of application in the FEDERAL REGISTER, the Director, OHMT, publishes a notice of withdrawal in the FEDERAL REGISTER.

(b) Except for documents for which confidential treatment was requested by the applicant, withdrawal of an application does not authorize the removal of any related records from the dockets or files of the RSPA.

§ 107.119 Amendment, suspension, termination, and referral for enforcement action.

(a) An exemption and any renewal thereof terminates according to its terms but not later than two years after the date of issuance unless terminated sooner under paragraph (c) of this section.

(b) The Director, OHMT may amend or suspend an exemption if:

(1) He determines that an activity under the exemption is not being performed in accordance with the terms of the exemption; or

(2) On the basis of information not available at the time the exemption was granted or renewed, such action is necessary to protect against risk to life or property.

(c) The Director, OHMT may terminate an exemption if:

(1) He determines that the exemption is no longer consistent with the public interest;

(2) The exemption is no longer necessary because of an amendment to the regulations; or

(3) The exemption was granted on the basis of false or misleading material information.

(d) Unless the Director, OHMT determines that immediate amendment, suspension, or termination of an exemption is necessary to abate the risk of an imminent hazard, he notifies the holder of the exemption or a party thereto in writing of the reasons therefore and provides that person an opportunity to show cause why the exemption should not be amended, suspended, or terminated under paragraph (b) or (c) of this section.

(e) Notwithstanding paragraphs (b), (c) and (d) of this section, the Director, OHMT may refer an exemption to the Office of Chief Counsel for initiation of an enforcement case under Subpart D of this part. If, as the result

of the enforcement proceeding, the holder of the exemption or a party thereto is determined to have violated the terms of the exemption, the Director, OHMT may amend, suspend, or terminate the exemption.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983]

§ 107.121 Appeal.

Any applicant for an exemption or the renewal of an exemption aggrieved by an action taken by the Director, OHMT, under this subpart and any holder of an exemption suspended or terminated by the Director, OHMT, under § 107.119 (b) or (c) may file an appeal with the Administrator, RSPA. The appeal must be filed within 30 days of service of notification of that action, suspension or termination. There has not been an exhaustion of administrative remedies until an appeal has been filed and the appellate process is completed by the issuance of an order by the Administrator, RSPA, granting or denying the appeal.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-10, 47 FR 43064, Sept. 30, 1982]

§ 107.123 Availability for public inspection.

(a) Information relevant to an application under this part, including the application and supporting data, memoranda of any informal meetings with the applicant, and the grant or denial of the application is available for public inspection, except as specified in paragraph (b) of this section, at the Office of Hazardous Materials Transportation, 400 7th Street, SW., Washington, D.C. 20590. Copies of available information may be obtained, as provided in Part 7 of this title.

(b) Information made available for inspection does not include materials which the Director, OHMT, determines should be withheld from public disclosure under § 107.5 and in accordance with the applicable provisions of section 552(b) of Title 5, United States Code, and Part 7 of this title.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-8, 45 FR 81571, Dec. 11, 1980]

APPENDIX A TO SUBPART B—LIST OF DEPARTMENT OF TRANSPORTATION OFFICIALS THROUGH WHOM APPLICATION FOR EXEMPTIONS SEEKING PRIORITY TREATMENT ON THE BASIS OF EXISTING EMERGENCIES MAY BE INITIATED BY TELEPHONE

CERTIFICATE HOLDING AIRCRAFT OPERATIONS

The Federal Aviation Administration Civil Aviation Security Office which serves the place where the flight(s) will originate or which is responsible for the operators overall aviation security program.

NONCERTIFICATE HOLDING AIRCRAFT OPERATORS (OPERATORS OPERATING UNDER FAR PART 91)

The Federal Aviation Administration Civil Aviation Security Office which serves the place where the flight(s) will originate. The nearest Civil Aviation Security Office may be located by calling the FAA Duty Officer. Day or Night, 202-863-5100.

MOTOR CARRIERS

Chief, Field Programs Division, Office of Motor Carrier Safety Field Operations, Federal Highway Administration, Department of Transportation, Washington, DC 20590. Day 202-366-1975 and Night 202-267-2100.

RAIL CARRIERS

Associate Administrator for Safety, Federal Railroad Administration, Department of Transportation, Washington, DC 20590. Day 202-366-9178 or 366-0488 and Night 202-267-2100.

WATER CARRIERS

Chief, Hazardous Materials Branch, Marine Technical and Hazardous Materials Division, United States Coast Guard, Washington, DC 20593. Day 202-267-1577 or Night 202-267-2100.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-1, 40 FR 56443, Dec. 3, 1975. Redesignated by Amdt. 107-4, 43 FR 43308, Sept. 25, 1978; Amdt. 107-7, 45 FR 32691, May 19, 1980; Amdt. 107-15, 51 FR 34986, Oct. 1, 1986; Amdt.107-17, 52 FR 36671, Sept. 30, 1987]

APPENDIX B TO SUBPART B—STANDARD CONDITIONS APPLICABLE TO EXEMPTIONS

PACKAGES, CONTAINERS, SHIPMENTS

Exemptions from the regulations governing packages, containers, and the preparation and offering of hazardous materials for shipment are subject to the following conditions.

(1) The outside of each package must be plainly and durably marked "DOT-E" followed by the number assigned. On portable tanks, cargo tanks and tank cars, the markings must be in letters at least two inches high on a contracting background.

(2) Each shipping paper issued in connection with a shipment made under an exemption must, in association with the entries required by 49 CFR 172.203, bear the notation "DOT-E" followed by the number assigned.

(3) When an exemption issued to a shipper contains special carrier requirements, the shipper shall furnish a copy of the exemption to the carrier before or at the time a shipment is tendered.

FLIGHTS OF CARGO-ONLY AIRCRAFT

Exemptions from the regulations govering the transportation of hazardous materials on cargo-only aircraft are subject to the following conditions.

(1) No person other than a required flight crewmember, an FAA inspector, the shipper or consignee of the material or a representative of the shipper or consignee so designated in writing, or a person necessary for handling the material may be carried on the aircraft.

(2) The operator of the aircraft must have advance permission from the owner or operator of each manned airport where the material is to be loaded or unloaded or where the aircraft is to land while the material is on board.

(3) At any airport where the airport owner or operator or authorized representative thereof has designated a location for loading or unloading the material concerned, the material may not be loaded or unloaded at any other location.

(4) If the material concerned can create destructive forces or have lethal or injurious effects over an appreciable area as a result of an accident involving the aircraft or the material, the loading and unloading of the aircraft and its operation in takeoff, enroute, and in landing must be conducted at a safe distance from heavily populated areas and from any place of human abode or assembly.

(5) If the aircraft is being operating by a holder of a certificate issued under Part 121 or Part 135 of Title 14, CFR, operations must be conducted in accordance with conditions and limitations specified in the certificate holder's operations specifications or operations manual accepted by the FAA. If the aircraft is being operated under Part 91 of Title 14, CFR, operations must be conducted in accordance with an operations plan accepted and acknowledged in writing by the Civil Aviation Security Office responsible for the operator's overall aviation security program.

(6) Each crewmember of the aircraft must be provided written instructions on the conditions and limitations of the operation being conducted.

(7) The aircraft and the loading arrangement to be used must be approved for safe carriage of the particular materials concerned by the FAA Civil Aviation Security Office responsible for the operator's overall aviation security program or the FAA Civil Aviation Security Office serving the place where the material is to be loaded.

(8) When Class A explosives are carried aboard a cargo aircraft under the provisions of Subchapter C, the aircraft operator shall take all possible action to insure that routes over heavily populated areas are avoided commensurate with considerations of flight safety. During the approach and landing phase, the aircraft operator shall request appropriate vectors when under radar control to avoid heavily populated areas.

[40 FR 48470, Oct. 15, 1975, as amended by Amdt. 107-2, 41 FR 7509, Feb. 19, 1976. Redesignated and amended by Amdt. 107-4, 43 FR 43308, Sept. 25, 1978; Amdt. 107-6, 45 FR 13090, Feb. 28, 1980; Amdt. 107-7, 45 FR 32691, May 19, 1980]

Subpart C—Preemption

SOURCE: Amdt. 107-3, 41 FR 38171, Sept. 9, 1976, unless otherwise noted.

EDITORIAL NOTE: Nomenclature changes to Subpart C appear at 48 FR 2651, Jan. 20, 1983 (Amdt. 107-11) and at 50 FR 45729, Nov. 1, 1985.

§ 107.201 Purpose and scope.

(a) This subpart prescribes procedures by which (1) a State or a political subdivision of a State having a requirement pertaining to the transportation of hazardous materials or any person affected by the requirement may obtain an administrative ruling as to whether the requirement is inconsistent with the Act or regulations issued under the Act, and (2) a State or a political subdivision of a State may obtain a determination as to whether a requirement of that State or political subdivision, which is inconsistent with the Act or regulations issued under the Act and therefore preempted by section 112(a) of the Act is not so preempted.

(b) For purposes of this subpart "political subdivision" includes a municipality; a public agency or other instrumentality of one or more States, municipalities, or other political subdivisions of a State; or a public corpora-

tion, board, or commission established under the laws of one or more States.

(c) For purposes of this subpart regulations issued under the Act means the regulations contained in this subchapter, Subchapter C of this chapter and 46 CFR Part 146.

(d) Unless otherwise ordered by the Director, OHMT, an application for an inconsistency ruling which includes an application for a determination that the requirement is not preempted will be treated and processed solely as an application for an inconsistency ruling.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

INCONSISTENCY RULINGS

§ 107.203 Application.

(a) Any State or political subdivision or any person affected by a requirement of a State or political subdivision may apply to the OHMT for an administrative ruling as to whether a particular existing requirement of the State or political subdivision concerned is inconsistent with a requirement of the Act or the regulations issued under the Act.

(b) Each application filed under this section for a ruling must:

(1) Be submitted to the Office of Hazardous Materials Transportation, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. Attention: Hazardous Materials Preemption Docket;

(2) Set forth the text of the State or political subdivision requirement for which the determination is being sought;

(3) Specify each requirement of the Act or the regulations issued under the Act with which the applicant seeks the State or political subdivision requirement to be compared for consistency; and

(4) State why the applicant believes the State or political subdivision requirement to be consistent or inconsistent with the requirements of the Act or the regulations issued under the Act.

(c) The filing of an application for a ruling under this section does not constitute grounds for noncompliance with any requirement of the Act or a regulation issued under the Act.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.205 Notice.

(a) If the applicant is other than a State or political subdivision, the applicant shall mail a copy of the application to the State or political subdivision concerned accompanied by a statement that the State or political subdivision may submit comments regarding the application to the OHMT within 45 days. The application filed with the OHMT must include a certification that the applicant has complied with this paragraph and must include the names and addresses of each State or political subdivision official to whom a copy of the application was sent.

(b) The OHMT may by serving notice on any other persons readily identifiable by the OHMT as persons who will be affected by the ruling sought or by publication in the FEDERAL REGISTER afford those persons an opportunity to file written comments on the application.

(c) Each person submitting written comments to the OHMT with respect to an application filed under this section shall send a copy of the comments to the applicant and certify to the OHMT that he has complied with this requirement. The OHMT may notify other persons participating in the proceeding of the comments and provide an opportunity for those other persons to respond.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[Amdt. 107-3, 41 FR 38171, Sept. 9, 1976, as amended by Amdt. 107-4, 43 FR 43308, Sept. 25, 1978; 43 FR 45366, Oct. 2, 1978; Amdt. 107-11, 48 FR 17094, Apr. 21, 1983]

§ 107.207 Processing.

(a) The Director, OHMT may initiate an investigation of any statement in an application and utilize in his evaluation any relevant facts obtained by that investigation. The Director, OHMT may solicit and accept submissions from third persons relevant to an application and will provide the applicant an opportunity to respond to all

third person submissions. In evaluating an application, the Director, OHMT may consider any other source of information. The Director, OHMT, on his own initiative may convene a hearing or conference, if he considers that a hearing or conference will advance his evaluation of the application.

(b) The Director, OHMT may dismiss the application without prejudice if:

(1) He determines that there is insufficient information upon which to base a ruling; or

(2) He requests additional information from the applicant and it is not submitted.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.209 Ruling.

(a) Upon consideration of the application and other relevant information received or obtained during the proceeding, the Director, OHMT, issues his ruling.

(b) Notwithstanding that application for a ruling has not been filed under § 107.203, the Director, OHMT, on his own initiative, may issue a ruling as to whether a particular State or political subdivision requirement is inconsistent with the Act or the regulations issued under the Act.

(c) In determining whether a State or political subdivision requirement is inconsistent with the Act or the regulations issued under the Act, the Director, OHMT considers:

(1) Whether compliance with both the State or political subdivision requirement and the Act or the regulations issued under the Act is possible; and

(2) The extent to which the State or political subdivision requirement is an obstacle to the accomplishment and execution of the Act and the regulations issued under the Act.

(d) The ruling includes a written statement setting forth the relevant facts and the legal basis for the ruling and provides that any person aggrieved thereby may file an appeal with the Administrator, RSPA.

(e) The OHMT serves a copy of the ruling upon the applicant, any other person who participated in the proceeding and upon any other person readily identifiable by the OHMT as one who is affected by the ruling. A copy of each ruling is placed on file in the public docket. The OHMT may publish the ruling or notice of the ruling in the FEDERAL REGISTER.

(f) A ruling issued under this section constitutes an administrative determination as to whether a particular requirement of a State or local subdivision is inconsistent with the Act or the regulations issued under the Act. The fact that a ruling has not been issued under this section with respect to a particular requirement of a State or political subdivision carries no implication as to the consistency or inconsistency of that requirement with the Act or any regulations issued under the Act.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.211 Appeal.

Any person aggrieved by a ruling issued under § 107.209 may file an appeal with the Administrator, RSPA. The appeal must be filed within 30 days of service of the ruling. There has not been an exhaustion of administrative remedies until an appeal has been filed and the appellate process is completed by the issuance of an order by the Administrator, RSPA, granting or denying the appeal.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

NON-PREEMPTION DETERMINATIONS

§ 107.215 Application.

(a) Any State or political subdivision may apply to the OHMT for a determination that a particular existing requirement of that State or political subdivision which is inconsistent with the Act or the regulations issued under the Act is not preempted.

(b) Each application filed under this section for a nonpreemption determination must:

(1) Be submitted to the Office of Hazardous Materials Transportation, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C.

20590. Attention: Hazardous Materials Preemption Docket;

(2) Set forth the text of the State or political subdivision requirement for which the determination is being sought;

(3) Include a copy of any court order and any ruling issued under § 107.209 having a bearing on the application;

(4) Contain an express acknowledgment by the applicant that the State or political subdivision requirement is inconsistent with one or more requirements of the Act or the regulations issued under the Act, unless it has been so determined by a court of competent jurisdiction or in a ruling issued under § 107.209;

(5) Specify each requirement of the Act or the regulations issued under the Act with which the State or political subdivision requirement is acknowledged or has been determined to be inconsistent;

(6) State why the applicant believes the State or political subdivision requirement affords an equal or greater level of protection to the public than is afforded by the requirements of the Act or the regulations issued under the Act;

(7) State why the applicant believes the State or political subdivision requirement does not unreasonably burden commerce; and

(8) Specify what steps the State or political subdivision is taking to administer and enforce effectively its inconsistent requirement.

§ 107.217 Notice.

(a) The applicant State or political subdivision shall mail a copy of the application and any subsequent amendments or other documents relating to the application to each person who is reasonably ascertainable by the applicant as a person who will be affected by the determination sought. The copy of the application must be accompanied by a statement that the person may submit comments regarding the application to the OHMT within 45 days. The application filed with the OHMT must include a certification that the application has complied with this paragraph and must include the names and addresses of each person to whom the application was sent.

(b) Notwithstanding the provisions of paragraph (a) of this section, if the State or political subdivision determines that compliance with paragraph (a) of this section would be impracticable, the applicant shall:

(1) Comply with the requirements of paragraph (a) of this section with regard to those persons whom it is reasonable and practicable to notify; and

(2) Include with the application filed with the OHMT a description of the persons or class or classes of persons to whom notice was not sent.

(c) The OHMT may require the State or political subdivision to provide notice in addition to that required by paragraphs (a) and (b) of this section, or may determine that the notice required by paragraph (a) of this section is not impracticable, or that notice should be published in the FEDERAL REGISTER.

(d) The OHMT may serve notice on any other persons readily identifiable by the OHMT as persons who will be affected by the determination sought and may afford those persons an opportunity to file written comments on the application.

(e) Any person submitting written comments to the OHMT with respect to an application filed under this section shall send a copy of the comments to the applicant. The person shall certify to the OHMT that he has complied with the requirements of this paragraph. The OHMT may notify other persons participating in the proceeding of the comments and provide an opportunity for those other persons to respond.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.219 Processing.

(a) The Director, OHMT may initiate an investigation of any statement in an application and utilize in his evaluation any relevant facts obtained by that investigation. The Director, OHMT may solicit and accept submissions from third persons relevant to an application and will provide the applicant an opportunity to respond to all third person submissions. In evaluat-

ing an application, the Director, OHMT, on his own initiative may convene a hearing or conference, if he considers that a hearing or conference will advance his evaluation of the application.

(b) The Director, OHMT may dismiss the application without prejudice if:

(1) He determines that there is insufficient information upon which to base a determination;

(2) Upon his request, additional information is not submitted by the applicant; or

(3) The applicant fails to provide the notice required by § 107.217.

(c) Except as provided in § 107.201(c), the Director, OHMT will only consider an application for a non-preemption determination if:

(1) The applicant State or political subdivision expressly acknowledges in its application that the State or political subdivision requirement for which the determination is sought is inconsistent with the requirements of the Act or the regulations issued under the Act; or

(2) The State or political subdivision requirement has been determined by a court of competent jurisdiction or in a ruling issued under § 107.209 to be inconsistent with the requirements of the Act or the regulations issued under the Act.

(d) When the OHMT has received all substantive information it considers necessary to process an application for a non-preemption determination, it serves notice of that fact upon the applicant and all other persons who received notice of the proceeding pursuant to § 107.217.

(e) To the extent possible, each application for a non-preemption determination will be acted upon in a manner consistent with the disposition of previous applications for non-preemption determinations.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.221 Determination and order.

(a) Upon consideration of the application and other relevant information received or obtained during the proceeding, the Director, OHMT issues an order setting forth his determination.

(b) The Director, OHMT may issue a non-preemption order only if he finds that the State or political subdivision requirement affords to the public a level of safety at least equal to that afforded by the requirements of the Act and the regulations issued under the Act and does not unreasonably burden commerce. In determining whether the State or political subdivision requirement unreasonably burdens commerce, the Director, OHMT considers the following factors:

(1) The extent to which increased costs and impairment of efficiency result from the State or political subdivision requirement.

(2) Whether the State or political subdivision requirement has a rational basis.

(3) Whether the State or political subdivision requirement achieves its stated purpose.

(4) Whether there is need for uniformity with regard to the subject concerned and if so, whether the State or political subdivision requirement competes or conflicts with those of other States and political subdivisions.

(c) The order includes a written statement setting forth the relevant facts and the legal basis for the determination. The order provides that any person aggrieved thereby may file an appeal with the Administrator, RSPA.

(d) The OHMT serves a copy of the order upon the applicant, any other person who participated in the proceeding and upon any other person readily identifiable by the OHMT as one who is affected by the order. A copy of each order is placed on file in the public docket. The Director, OHMT may publish the order or notice of the order in the FEDERAL REGISTER.

(e) An order issued under this section constitutes an administrative determination as to whether a particular requirement of a State or local subdivision of a State, which is inconsistent with the requirements of the Act or the regulations issued under the Act is not preempted.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.223 Timeliness.

If the OHMT fails to take action on the application within 90 days of serving the notice required by § 107.219(d), the applicant may treat the application as having been denied in all respects and may appeal therefrom as provided in § 107.225.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

§ 107.225 Appeal.

Any person aggrieved by an order issued under § 107.221 may file an appeal with the Administrator, RSPA. The appeal must be filed within 30 days of service of the order. There has not been an exhaustion of administrative remedies until an appeal has been filed and the appellate process is completed by the issuance of an order by the Administrator, RSPA, granting or denying the appeal.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

Subpart D—Enforcement

AUTHORITY: 49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1.

SOURCE: Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, unless otherwise noted.

§ 107.299 Definitions.

In this subpart, and in enforcement actions initiated thereunder,

"Investigation" includes investigations authorized under 49 U.S.C. 1809(a) and inspections authorized under 49 U.S.C. 1809(c).

"Knowledge" or "knowingly" means that a person who commits an act which is a violation of the Act or of the requirements of this subchapter or Subchapter C of this chapter commits that act with knowledge or knowingly when that person (1) has actual knowledge of the facts that give rise to the violation, or (2) should have known of the facts that give rise to the violation. A person knowingly commits an act if the act is done voluntarily and intentionally. Knowledge or knowingly means that a person is presumed to be aware of the requirements of the Act and this subchapter and Subchapter C of this chapter. Knowledge or knowingly does not require that a person have an intent to violate the requirements of the Act or the requirements of this subchapter or Subchapter C of this chapter.

§ 107.301 Delegated authority for enforcement.

Under redelegation from the Administrator, Research and Special Programs Administration, the OHMT and the Office of the Chief Counsel exercise their authority for enforcement of the Act, this subchapter, and Subchapter C of this subchapter, in accordance with § 1.53 of this title.

§ 107.303 Purpose and scope.

This subchapter describes the various enforcement authorities exercised by the OHMT and the Office of Chief Counsel and the associated sanctions and prescribes the procedures governing the exercise of those authorities and the imposition of those sanctions.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended by Amdt. 107-15, 51 FR 34986, Oct. 1, 1986]

§ 107.305 Investigations.

(a) *General.* In accordance with its delegated authority under Part 1 of this title, the OHMT may initiate investigations relating to compliance by any person with any provisions of this subchapter or Subchapter C of this chapter, or any exemption, approval, or order issued thereunder, or any court decree relating thereto. The OHMT encourages voluntary production of documents in accordance with and subject to § 107.13, and hearings may be conducted, and depositions taken pursuant to section 109(a) of the Act. The OHMT may conduct investigative conferences and hearings in the course of any investigation.

(b) *Investigators.* Investigations under Section 109(a) of the Act are conducted by OHMT personnel duly authorized for that purpose by the Director, OHMT. Inspections under Section 109(b) of the Act, are conducted by OHMT Hazardous Materials Enforcement Specialists who are duly designated for that purpose. Each official so designated may administer oaths and receive affirmations in any

matter under investigation by the OHMT.

(c) *Notification.* Any person who is the subject of an OHMT investigation and who is requested to furnish information or documentary evidence is notified as to the general purpose for which the information or evidence is sought.

(d) *Termination.* When the facts disclosed by an investigation indicate that further action is unnecessary or unwarranted at that time, the person being investigated is notified and the investigative file is closed without prejudice to further investigation by the OHMT.

(e) *Confidentiality.* Information received in an investigation under this section, including the identity of the person investigated and any other person who provides information during the investigation, shall remain confidential under the investigatory file exception, or other appropriate exception, to the public disclosure requirements of 5 U.S.C. 552.

COMPLIANCE ORDERS AND CIVIL PENALTIES

§ 107.307 General.

(a) When the Office of Chief Counsel has reason to believe that a person is knowingly engaging or has knowingly engaged in conduct which is a violation of the Act or any provision of this subchapter or Subchapter C of this chapter, or any exemption, or order issued thereunder, for which the Office of Chief Counsel exercises enforcement responsibility, and if time, the nature of the violation, and the public interest permit, the Office of Chief Counsel may conduct proceedings to assess a civil penalty or to issue an order directing compliance, or both, or seek any other remedy available under the Act.

(b) In the case of a proceeding initiated for failure to comply with an exemption, the allegation of a violation of a term or condition thereof is considered by the Office of Chief Counsel to constitute an allegation that the exemption holder or party to the exemption is failing, or has failed to comply with the underlying regulations from which relief was granted by the exemption.

§ 107.309 Warning letters.

(a) In addition to the initiation of proceedings under § 107.307 for the imposition of sanctions or other remedies, the OHMT may issue a warning letter to any person whom the OHMT believes to have committed a probable violation of the Act or any provision of this subchapter, Subchapter C of this chapter, or any exemption issued thereunder.

(b) A warning letter issued under this section includes:

(1) A statement of the facts upon which the OHMT bases its determination that the person has committed a probable violation;

(2) A statement that the recurrence of the probable violations cited may subject the person to enforcement action; and

(3) An opportunity to respond to the warning letter by submitting pertinent information or explanations concerning the probable violations cited therein.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended by Amdt. 107-15, 51 FR 34986, Oct. 1, 1986]

§ 107.311 Notice of probable violation.

(a) The Office of Chief Counsel begins an enforcement action under § 107.307, by serving a notice of probable violation on a person alleging the violation of one or more provisions of the Act, this subchapter, or Subchapter C of this chapter, or any exemption issued thereunder.

(b) A notice of probable violation issued under this section includes the following information:

(1) A citation of the provisions of the Act, this subchapter, Subchapter C of this chapter, or the terms of any exemption issued thereunder which the Office of Chief Counsel believes the respondent is violating or has violated.

(2) A statement of the factual allegations upon which the demand for remedial action, a civil penalty, or both, is based.

(3) A statement of the respondent's right to present written or oral expla-

nations, information, and arguments in answer to the allegations and in mitigation of the sanction sought in the notice of probable violation.

(4) A statement of the respondent's right to request a hearing and the procedures for requesting a hearing.

(5) In addition, in the case of a notice of probable violation proposing a compliance order, a statement of the proposed actions to be taken by the respondent to achieve compliance.

(6) In addition, in the case of a notice of probable violation proposing a civil penalty:

(i) A statement of the maximum civil penalty for which the respondent may be liable;

(ii) The amount of the preliminary civil penalty being sought by the Office of Chief Counsel, constitutes the maximum amount the Chief Counsel may seek throughout the proceeding; and

(iii) A description of the manner in which the respondent makes payment of any money due the United States as a result of the proceeding.

(c) The Office of Chief Counsel may amend a notice of probable violation at any time before issuance of a compliance order or an order assessing a civil penalty. If Office of Chief Counsel alleges any new material facts or seeks new or additional remedial action or an increase in the amount of the proposed civil penalty, it issues a new notice of probable violation under this section.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended at 50 FR 45730, Nov. 1, 1985]

§ 107.313 Reply.

(a) Within 30 days of receipt of a notice of probable violation, the respondent must either:

(1) Admit the violation under § 107.315;

(2) Make an informal response under § 107.317; or

(3) Request a hearing under § 107.319.

(b) Failure of the respondent to file a reply as provided in this section constitutes a waiver of the respondent's right to appear and contest the allegations and authorizes the Chief Counsel, without further notice to the respondent, to find the facts to be as alleged in the notice of probable violation and issue an order directing compliance or assess a civil penalty, or, if proposed in the notice, both. Failure to request a hearing under paragraph (a)(3) of this section constitutes a waiver of the respondent's right to a hearing.

(c) Upon the request of the respondent, the Office of Chief Counsel may, for good cause shown and filed within the 30 days prescribed in the notice of probable violation, extend the 30-day response period.

§ 107.315 Admission of violations.

(a) In responding to a notice of probable violation issued under § 107.311, the respondent may admit the alleged violations and agree to accept the terms of a proposed compliance order or to pay the amount of the preliminarily assessed civil penalty, or, if proposed in the notice, both.

(b) If the respondent agrees to the terms of a proposed compliance order, the Chief Counsel issues a final order prescribing the remedial action to be taken by the respondent.

(c) Payment of a civil penalty must be made by certified check or money order payable to the "Department of Transportation" and sent to the Chief, General Accounting Branch (M-86.2), Accounting Operations Division, Office of the Secretary, Room 2228, Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended by Amdt. 107-17, 52 FR 36671, Sept. 30, 1987]

§ 107.317 Informal response.

(a) In responding to a notice of probable violation under § 107.311, the respondent may submit to the official who issued the notice, written explanations, information, or arguments in response to the allegations, the terms of a proposed compliance order, or the amount of the preliminarily assessed civil penalty.

(b) The respondent may include in his informal response a request for a conference. Upon the request of the respondent, the conference may be either in person or by telephone. A re-

quest for a conference must set forth the issues the respondent will raise at the conference.

(c) Upon receipt of a request for a conference under paragraph (b) of this section, the Chief Counsel's Office, in consultation with the OHMT, arranges for a conference as soon as practicable at a time and place of mutual convenience.

(d) The respondent's written explanations, information, and arguments as well as the respondent's presentation at a conference are considered by the Chief Counsel in reviewing the notice of probable violation. Based upon a review of the proceeding, the Chief Counsel may dismiss the notice of probable violation in whole or in part. If he does not dismiss it in whole, he issues an order directing compliance or assessing a civil penalty, or, if proposed in the notice, both.

§ 107.319 Request for a hearing.

(a) In responding to a notice of probable violation under § 107.311, the respondent may request a formal administrative hearing on the record before an Administrative Law Judge (ALJ) obtained by the Office of the Chief Counsel.

(b) A request for a hearing under paragraph (a) of this section must:

(1) State the name and address of the respondent and of the person submitting the request if different from the respondent;

(2) State which allegations of violations, if any, are admitted; and

(3) State generally the issues to be raised by the respondent at the hearing. Issues not raised in the request are not barred from presentation at the hearing; and

(4) Be addressed to the official who issued the notice.

(c) After a request for a hearing that complies with the requirements of paragraph (b) of this section, the Chief Counsel obtains an ALJ to preside over the hearing and notifies the respondent of this fact. Upon assignment of an ALJ, all further matters in the proceeding are conducted by and through the ALJ.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended at 48 FR 17094, Apr. 21, 1983]

§ 107.321 Hearing.

(a) To the extent practicable, the hearing is held in the general vicinity of the place where the alleged violation occurred or at a place convenient to the respondent. Testimony by witnesses shall be given under oath and the hearing shall be recorded verbatim.

(b) Hearings are conducted in accordance with the Federal Rules of Evidence and Federal Rules of Civil Procedure; however, the ALJ may modify them as he determines necessary in the interest of a full development of the facts. In addition, the ALJ may:

(1) Administer oaths and affirmations;

(2) Issue subpoenas as provided by § 107.13;

(3) Adopt procedures for the submission of motions, evidence, and other documents pertinent to the proceeding;

(4) Take or cause depositions to be taken;

(5) Rule on offers of proof and receive relevant evidence;

(6) Examine witnesses at the hearing;

(7) Convene, recess, reconvene, adjourn and otherwise regulate the course of the hearing;

(8) Hold conferences for settlement, simplification of the issues, or any other proper purpose; and

(9) Take any other action authorized by, or consistent with, the provisions of this subpart and permitted by law which may expedite the hearing or aid in the disposition of an issue raised therein.

(c) The official who issued the notice of probable violation, or his representative, has the burden of proving the facts alleged therein.

(d) The respondent may appear and be heard on his own behalf or through counsel of his choice. The respondent or his counsel may offer relevant information including testimony which he believes should be considered in opposition to the allegations or which may bear on the sanction being sought and conduct such cross-examination as may be required for a full disclosure of the facts.

§ 107.323 ALJ's decision.

(a) After consideration of all matters of record in the proceeding, the ALJ shall issue an order dismissing the notice of probable violation in whole or in part or granting the sanction sought by the Office of Chief Counsel in the notice. If the ALJ does not dismiss the notice of probable violation in whole, he issues an order directing compliance or assessing a civil penalty, or, if proposed in the notice, both. The order includes a statement of the findings and conclusions, and the reasons therefore, on all material issues of fact, law, and discretion.

(b) If, within 20 days of receipt of an order issued under paragraph (a) of this section, the respondent does not submit in writing his acceptance of the terms of an order directing compliance, or, where appropriate, pay a civil penalty, or file an appeal under § 107.325, the case may be referred to the Attorney General with a request that an action be brought in the appropriate United States District Court to enforce the terms of a compliance order or collect the civil penalty.

§ 107.325 Appeals.

(a) *Hearing proceedings.* A party aggrieved by an ALJ's decision and order issued under § 107.323, may file a written appeal in accordance with paragraph (c) of this section with the Administrator, Research and Special Programs Administration (RSPA), 400 Seventh Street, S.W., Washington, D.C. 20590.

(b) *Non-Hearing proceedings.* A respondent aggrieved by an order issued under § 107.317, may file a written appeal in accordance with paragraph (c) of this section with the Administrator, RSPA, 400 Seventh Street, S.W., Washington, D.C. 20590.

(c) An appeal of an order issued under this subpart must:

(1) Be filed within 20 days of receipt of the order by the appealing party; and

(2) State with particularity the findings in the order that the appealing party challenges, and include all information and arguments pertinent thereto.

(d) If the Administrator, RSPA, affirms the order in whole or in part, the respondent must comply with the terms of the decision within 20 days of the respondent's receipt thereof, or within the time prescribed in the order. If the respondent does not comply with the terms of the decision within 20 days of receipt, or within the time prescribed in the order, the case may be referred to the Attorney General for action to enforce the terms of the decision.

(e) The filing of an appeal stays the effectiveness of an order issued under § 107.317 or § 107.323. However, if the Administrator, RSPA, determines that it is in the public interest, he may keep an order directing compliance in force pending appeal.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended at 50 FR 45730, Nov. 1, 1985]

§ 107.327 Compromise and settlement.

(a) At any time before an order issued under § 107.317 or § 107.323 is referred to the Attorney General for enforcement, the respondent or the Office of Chief Counsel may propose a compromise as follows:

(1) In civil penalty cases, the respondent or Chief Counsel may offer to compromise the amount of the penalty by submitting an offer for a specific amount to the other party. An offer of compromise by the respondent shall be submitted to the Chief Counsel who may, after consultation with OHMT, accept or reject it.

(i) A compromise offer stays the running of any response period then outstanding.

(ii) If a compromise is agreed to by the parties, the respondent is notified in writing. Upon receipt of payment by Office of Chief Counsel, the respondent is notified in writing that acceptance of payment is in full satisfaction of the civil penalty proposed or assessed, and Office of Chief Counsel closes the case with prejudice to the respondent.

(iii) If a compromise cannot be agreed to, the respondent is notified in writting and is given 10 days or the amount of time remaining in the then outstanding response period, whichever is longer, to respond to whatever action was taken by the Office of

Chief Counsel or the Administrator, RSPA.

(2) In compliance order cases, the respondent may propose a consent agreement to the Chief Counsel. If the Chief Counsel accepts the agreement, he issues an order in accordance with its terms. If the Chief Counsel rejects the agreement, he directs that the proceeding continue. An agreement submitted to the Chief Counsel must include:

(i) A statement of any allegations of fact which the respondent challenges;

(ii) The reasons why the terms of a compliance order or proposed compliance order are or would be too burdensome for the respondent, or why such terms are not supported by the record in the case;

(iii) A proposed compliance order suitable for issuance by the Chief Counsel;

(iv) An admission of all jurisdictional facts; and

(v) An express waiver of further procedural steps and all right to seek judicial review or otherwise challenge or contest the validity of the order.

(b) Notwithstanding paragraph (a)(1) of this section, the respondent or Office of Chief Counsel may propose to settle the case. If the Chief Counsel agrees to a settlement, the respondent is notified and the case is closed without prejudice to the respondent.

[Amdt. 107-11, 48 FR 2651, Jan. 20, 1983, as amended at 50 FR 45730, Nov. 1, 1985]

§ 107.329 Maximum penalties.

(a) A person who knowingly violates a requirement of the Act, this chapter or an exemption issued under Subchapter B of this chapter applicable to the transporting of hazardous materials or the causing of them to be transported or shipped is liable for a civil penalty of not more than $10,000 for each violation. When the violation is a continuing one, each day of the violation constitutes a separate offense.

(b) A person who knowingly violates a requirement of the Act, this chapter or an exemption issued under Subchapter B of this Chapter applicable to the manufacture, fabrication, marking, maintenance, reconditioning, repair, or testing of a packaging or container which is represented, marked, certified or sold by that person as being qualified for use in the transportation of hazardous materials in commerce is liable for a civil penalty of not more than $10,000 for each violation.

§ 107.331 Assessment considerations.

In assessing a civil penalty under this subpart, the Chief Counsel takes into account:

(a) The nature and circumstances of the violation;

(b) The extent and gravity of the violation;

(c) The degree of the respondent's culpability;

(d) The respondent's history of prior offenses;

(e) The respondent's ability to pay;

(f) The effect on the respondent's ability to continue in business; and

(g) Such other matters as justice may require.

CRIMINAL PENALTIES

§ 107.333 Criminal penalties generally.

Section 110(b) of the Act (49 U.S.C. 1809(b)) provides a criminal penalty of a fine of not more than $25,000 and imprisonment for not more than five years, or both, for any person who willfully violates a provision of the Act or a regulation issued under the Act.

§ 107.335 Referral for prosecution.

If the OHMT becomes aware of a possible willful violation of the Act, this chapter, Subchapter C of this chapter, or any exemption, or order issued thereunder, for which the OHMT exercises enforcement responsibility, it shall report it to the Office of the Chief Counsel, Research and Special Programs Administration, U.S. Department of Transportation, Washington, D.C. 20590. If appropriate, the Chief Counsel refers the report to the Department of Justice for criminal prosecution of the offender.

INJUNCTIVE ACTION

§ 107.337 Injunctions generally.

Whenever it appears to the Office of Chief Counsel that a person has engaged, or is engaged, or is about to

engage in any act or practice constituting a violation of any provision of the Act, this subchapter, Subchapter C of this chapter, or any exemption, or order issued thereunder, for which the Office of Chief Counsel exercises enforcement responsibility, the Administrator, RSPA, or his delegate, may request the Attorney General to bring an action in the appropriate United States District Court for such relief as is necessary or appropriate, including mandatory or prohibitive injunctive relief, interim equitable relief, and punitive damages as provided by section 111(a) of the Act.

§ 107.339 Imminent hazards.

Whenever it appears to the Office of the Chief Counsel that there is a substantial likelihood that death, serious illness, or severe personal injury will result from the transportation of a particular hazardous material or hazardous materials container, before a compliance order proceeding or other administrative hearing or formal proceeding to abate the risk of that harm can be completed, the Administrator, RSPA, or his delegate, may bring an action under section 111(b) of the Act in the appropriate United States District Court for an order suspending or restricting the transporation of that hazardous material or those containers or for such other equitable relief as is necessary or appropriate to ameliorate the hazard.

[Amdt. 107-11, 48 FR 2661, Jan. 20, 1983, as amended by Amdt. 107-15, 51 FR 34987, Oct. 1, 1986]

Subpart E—Designation of Approval and Certification Agencies

AUTHORITY: 49 U.S.C. 1804, 1805, 1808; 49 CFR 1.53; App. A to Part 1.

SOURCE: Amdt. 107-13, 50 FR 10062, Mar. 13, 1985, unless otherwise noted.

§ 107.401 Purpose and scope.

(a) This subpart establishes procedures for the designation of agencies to issue approval certificates and certifications for types of packagings designed, manufactured, tested, or maintained in conformance with the requirements of this subchapter, Subchapter C of this chapter, and standards set forth in the United Nations (U.N.) Recommendations (Transport of Dangerous Goods). Except for certifications of compliance with U.N. packaging standards, this subpart does not apply unless made applicable by a rule in Subchapter C of this chapter.

(b) The Director, OHMT may issue approval certificates and certifications addressed in paragraph (a) of this section.

§ 107.402 Application for designation as an approval or certification agency.

(a) Any organization or person seeking designation as an approval or certification agency shall apply in writing to the Director, Office of Hazardous Materials Transportation (DMT-20), Department of Transportation, 400 Seventh Street, SW., Washington D.C. 20590. Each application must be signed and certified to be correct by the applicant or, if the applicant is an organization, by an authorized officer or official representative of the organization. Any false statement or representation, or the knowing and willful concealment of a material fact, may subject the applicant to prosecution under the provisions of 18 U.S.C. 1001, result in the denial or termination of a designation.

(b) Each application for designation must be in English and include the following information:

(1) Name and address of the applicant, including place of incorporation if a corporation. In addition, if the applicant is not a resident of the United States, the name and address of a permanent resident of the United States designated in accordance with § 107.7 to serve as agent for service of process.

(2) If the applicant's principal place of business is in a country other than the United States, a copy of the designation from the Competent Authority of that country delegating to the applicant an approval or designated agency authority for the type of packaging for which a DOT designation is sought, and a statement that the Competent Authority also delegates similar authority to U.S. Citizens or organizations having designations under this subpart from the RSPA.

(3) A listing, by DOT specification (or exemption) number, or UN designation, of the types of packagings for which approval authority is sought.

(4) A personnel qualifications plan listing the qualifications that the applicant will require of each person to be used in the performance of each packaging approval or certification function. As a minimum, these qualifications must include:

(i) The ability to review and evaluate design drawings, design and stress calculations;

(ii) A knowledge of the applicable regulations of Subchapter C of this chapter and, when applicable, U.N. standards; and

(iii) The ability to conduct or monitor and evaluate test procedures and results; and

(iv) The ability to review and evaluate the qualifications of materials and fabrication procedures.

(5) A statement that the applicant will perform its functions independent of the manufacturers and owners of the packagings concerned.

(6) A statement that the applicant will allow the Director, OHMT or his representative to inspect its records and facilities in so far as they relate to the approval or certification of specification packagings and shall cooperate in the conduct of such inspections.

(c) The applicant shall furnish any additional information relevant to the applicant's qualifications, if requested by the Director, OHMT.

[Amdt. 107-13, 50 FR 10062, Mar. 13, 1985; 50 FR 16089, Apr. 24, 1985]

§ 107.403 Designation of approval agencies.

(a) If the Director, OHMT determines that an application contains all the required information, the applicant is sent a letter of designation and assigned an identification code.

(b) If the Director, OHMT determines that an application does not contain all the required information, the application is denied and the applicant is sent a written notice containing all the reasons for the denial.

(c) Within 30 days of an initial denial of an application under paragraph (b) of this section, the applicant may file an amended application. If after considering the amended application, the Director determines that it should be denied, he notifies the applicant, and the denial constitutes the final action of the Director on the application. Within 60 days of receipt of the final denial the applicant may appeal the denial to the Administrator, RSPA, setting forth in writing where the Director erred in this determination.

§ 107.404 Conditions of designation.

(a) Each designation made under this subpart contains the following conditions:

(1) The designated approval or certification agency may use only testing equipment that it has determined, through personal inspection, to be suitable for the purpose.

(2) Each approval certificate and certification issued by the designated approval agency must contain the name and identification code of the approval agency.

(3) Each approval certificate and certification must be in a format acceptable to the Director, OHMT.

(b) The designated approval agency shall notify the Director, OHMT within 20 days after the date there is any change in the information submitted under § 107.402.

(c) The designated approval agency shall comply with all of the terms and conditions stated in its letter of designation under the subpart.

(d) Nothing in this part relieves a manufacturer or owner of a packaging of responsibility for compliance with any of the applicable requirements of this title.

§ 107.405 Termination of designation.

(a) Any designation issued under § 107.403 of this subchapter may be suspended or terminated if the Director, OHMT determines that:

(1) The application for designation contained a misrepresentation, or the applicant willfully concealed a material fact.

(2) The approval agency failed to comply with a term or condition stated in the agency's letter of designation.

(3) The Competent Authority of an approval agency of a country outside

the United States has failed to initiate, maintain or recognize a qualified U.S. approval agency.

(b) Before a designation is suspended or terminated, the Director, OHMT shall give to the approval agency:

(1) Written notice of the facts or conduct believed to warrant suspension or termination of the designation.

(2) Sixty days in which to show in writing why the designation should not be suspended or terminated.

SUBCHAPTER C—HAZARDOUS MATERIALS REGULATIONS

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

AUTHORITY: 49 App. U.S.C. 1802, 1803, 1804, 1808; 49 CFR Part 1.

EDITORIAL NOTE: Nomenclature changes to Part 171 appear at 50 FR 45730-45731, Nov. 1, 1985.

§ 171.1 Purpose and scope.

This subchapter prescribes the requirements of the Department of Transportation governing:

(a) The transportation of hazardous materials by, and their offering to:

(1) Carriers by rail car, aircraft and vessel (except as delegated at § 1.46(t) of this title);

(2) Interstate and foreign carriers by motor vehicle; and

(3) Intrastate carriers by motor vehicle so far as this subchapter relates to:

(i) Hazardous waste.

(ii) Hazardous substances.

(iii) Flammable cryogenic liquids in portable tanks and cargo tanks.

(b) The manufacture, fabrication, marking, maintenance, reconditioning, repairing, or testing of a packaging or container which is represented, marked, certified, or sold for use in such transportation as specified in paragraph (a) of this section.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-53, 45 FR 34586, May 22, 1980, as amended by Amdt. 171-74, 48 FR 27690, June 16, 1983; Amdt. 171-78, 49 FR 10510, Mar. 20, 1984]

§ 171.2 General requirements.

(a) No person may offer or accept a hazardous material for transportation in commerce unless that material is properly classed, described, packaged, marked, labeled, and in condition for shipment as required or authorized by this subchapter (including §§ 171.11, 171.12, and 176.11), or

(b) No person may transport a hazardous material in commerce unless that material is handled and transported in accordance with this subchapter, or an exemption issued under Subchapter B of this chapter.

(c) No person may represent, mark, certify, sell, or offer a packaging or container as meeting the requirements of this subchapter or an exemption issued under Subchapter B of this chapter, governing its use in the transportation in commerce of a hazardous material, whether or not it is used or intended to be used for the transportation of a hazardous material, unless the packaging or container is manufactured, fabricated, marked, maintained, reconditioned, repaired, or retested, as appropriate, in accordance with this subchapter, an approval issued thereunder, or an exemption issued under Subchapter B of this chapter.

(d) The representations, markings, and certifications subject to the prohibitions of paragraph (c) of this section include:

(1) Specification identifications that include the letters "DOT" or "UN";

(2) Exemption, approval, and registration numbers that include the letters "DOT;" and

(3) Test dates displayed in association with specification, registration, approval, or exemption markings indicating compliance with a test or retest requirement of this subchapter, an approval issued thereunder, or an exemption issued under Subchapter B of this chapter.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-70, 48 FR 2655, Jan. 20, 1983]

§ 171.3 Hazardous waste.

(a) No person may offer for transportation or transport a hazardous waste (as defined in § 171.8 of this subchapter) in interstate or intrastate commerce except in accordance with the requirements of this subchapter.

(b) No person may accept for transportation, transport, or deliver a hazardous waste for which a manifest is required unless that person:

(1) Has marked each motor vehicle used to transport hazardous waste in accordance with § 397.21 or § 1058.2 of this title even though placards may not be required;

(2) Complies with the requirements for manifests set forth in § 172.205 of this subchapter; and

(3) Delivers, as designated on the manifest by the generator, the entire quantity of the waste received from the generator or a transporter to:

(i) The designated facility or, if not possible, to the designated alternate facility;

(ii) The designated subsequent carrier; or

(iii) A designated place outside the United States.

NOTE: Federal law specifies penalties up to $25,000 fine and 5 years imprisonment for the willful discharge of hazardous waste at other than designated facilities. 49 U.S.C. 1809.

(c) With regard to hazardous waste subject to this subchapter, any requirement of a state or its political subdivision is inconsistent with this subchapter if it applies because that material is a waste material and applies differently from or in addition to the requirements of this subchapter concerning:

(1) Packaging, marking, labeling, or placarding;

(2) Format or contents of discharge reports (except immediate reports for emergency response); and

(3) Format or contents of shipping papers, including hazardous waste manifests.

NOTE: See § 172.205; each manifest must be prepared in accordance with 40 CFR 262.20 including the instructions and limitations specified for preparation of a manifest.

(d) If a discharge of hazardous waste or other hazardous material occurs during transportation, and an official of a State or local government or a Federal agency, acting within the scope of his official responsibilities, determines that immediate removal of the waste is necessary to prevent further consequence, that official may authorize the removal of the waste without the preparation of a manifest. [NOTE: In such cases, EPA does not require carriers to have EPA identification numbers.]

(e) If a hazardous material that is a hazardous waste is required by this subchapter to be shipped in a closed head DOT specification drum, and the hazardous waste contains solids or semisolids that would make its placement in a closed head drum impracticable (e.g., a drum with a 2.3 inch bung opening), an equivalent specification open head drum (except for closure) may be used for such a waste.

NOTE 1: EPA requires shippers (generators) and carriers (transporters) of hazardous wastes to have identification numbers which must be displayed on hazardous waste manifests. See 40 CFR 262.20(a) and 263.11. (Identification number application forms (EPA Form 8700-12) may be obtained from EPA Regional Offices.)

NOTE 2: The following EPA regulation is set forth in 40 CFR Part 263:

§ 263.31 Discharge clean up

A transporter must clean up any hazardous waste discharge that occurs during transportation or take such action as may be required or approved by Federal, State, or local officials so that the hazardous waste discharge no longer presents a hazard to human health or the environment.

[Amdt. 171-53, 45 FR 34586, May 22, 1980, as amended by Amdt. 171-53, 45 FR 74648, Nov. 10, 1980; Amdt. 171-78, 49 FR 10510, Mar. 20, 1984]

§ 171.4 Changes in specifications for tank cars.

(a) See § 179.4 of this subchapter.

[31 FR 9068, July 1, 1966. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 171-42, 43 FR 48643, Oct. 19, 1978]

§ 171.5 Procedure covering tank car construction.

(a) See § 179.3 of this subchapter.

[Order 71, 31 FR 9068, July 1, 1966. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 171-42, 43 FR 48643, Oct. 19, 1978]

§ 171.6 [Reserved]

§ 171.7 Matter incorporated by reference.

(a) There is incorporated by reference in Parts 170-189 of this subchapter all matter referred to that is not specifically set forth. These materials are hereby made a part of the regulations in Parts 170-189 of this subchapter. Unless the reference provides otherwise, matter subject to change is incorporated only as it is in effect on the date of issuance of the regulation referring to that matter.

(b) All incorporated matter is available for inspection in the Dockets Branch, Room 8426 Nassif Building, 400 7th Street SW., Washington, DC 20590.

(c) Matter incorporated by reference is available for distribution as follows:

(1) ASME: American Society of Mechanical Engineers, United Engineering Center, 345 East 47th Street, New York, NY 10017.

(2) American National Standard: American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

(3) CGA: Compressed Gas Association, Inc., 1235 Jefferson Davis Highway, Arlington, Virginia 22202.

(4) Bureau of Explosives: Bureau of Explosives, Association of American Railroads, American Railroads Building, 1920 L Street NW., Washington, DC 20036.

(5) AAR: Association of American Railroads, 59 East Van Buren Street, Chicago, Ill. 60605.

(6) ASTM: American Society for Testing and Materials, 1916 Race Street, Philadelphia, Pa. 19103.

(7) API: American Petroleum Institute, 1801 K Street, NW., Washington, DC 20037.

(8) AISI: American Iron and Steel Institute, 1000 16th Street NW., Washington, DC 20036.

(9) The Chlorine Institute, 342 Madison Avenue, New York, NY 10017.

(10) CMA: Chemical Manufacturers Association, 2501 M Street, NW., Washington, DC 20037.

(11) NFPA: National Fire Protection Association, Batterymarch Park, Quincy, Mass. 02269.

(12) Aluminum Association: The Aluminum Association, 818 Connecticut Ave., NW., Washington, DC 20006.

(13) NACE: National Association of Corrosion Engineers, 1440 South Creek, Houston, Texas 77084.

(14) IME: Institute of Makers of Explosives, 1575 Eye Street, NW., Washington, DC 20005.

(15) IAEA: International Atomic Energy Agency, Wagramerstrasse 5, P.O. Box 100, A-1400, Vienna, Austria (IAEA publications may be purchased in the United States from: Unipub, Inc., Post Office Box 433, New York, NY 10016).

(16) USDOE: United States Department of Energy, Washington, DC 20545. Regulations of the USDOE are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. Other publications by the USDOE may be obtained from the National Technical Information Center, U.S. Department of Commerce, Springfield, Virginia 22151.

(17) Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

(18) National Wooden Box Association, Post Office Box 1010, Cumberland, Md. 21502.

(19) TFI: The Fertilizer Institute, 1015 18th Street NW., Washington, DC 20036.

(20) AWWA: American Water Works Association, 1010 Vermont Ave., NW., Washington, DC 20005.

(21) AWS: American Welding Society, 550 N.W. LeJeune Rd., Miami, Florida 33126.

(22) USDC: U.S. Department of Commerce, National Technical Infor-

mation Service, 5285 Port Royal Road, Springfield, Va. 22151.

(23) International Maritime Organization, #4 Albert Embankment, London, SE 17SR, United Kingdom.

(24) Uniform Classification Committee, 222 South Riverside Plaza, Chicago, Ill. 60606.

(25) [Reserved]

(26) USNRC: United States Nuclear Regulatory Commission, Washington, D.C. 20555.

(27) UN: United Nations: United Nations Sales Section, New York, New York 10017.

(28) OPPSD: Organic Peroxide Producers' Safety Division, Society of the Plastic Industries, Inc., 355 Lexington Avenue, New York, NY 10017.

(29) ISO: International Organization for Standardization, Case Postale 56, CH-1211 Geneva 20, Switzerland. Also available from the American National Standards Institute, Inc., 1430 Broadway, New York, NY 10018.

(30) National Motor Freight Traffic Association, Inc., Agent, 1616 "P" Street, NW., Washington, DC 20036.

(31) ICAO: International Civil Aviation Organization, P.O. Box 400, Place de l'Aviation Internationale, 1000 Sherbrooke Street West, Montreal, Quebec, Canada H3A 2R2. ICAO Technical Instructions available from INTEREG, International Regulations Publishing and Distribution Organization, 4000 West Victoria Avenue, Chicago, Illinois 60646.

(32) TDG Regulations: Canadian Government Publishing Center, Supply and Services Canada, Ottawa, Ontario, Canada K1 A 0S9.

(d) The full title and application of the matter incorporated by reference in Parts 170-189 of this chapter are as follows:

(1) ASME Code means Sections II (Parts A and B), V, VIII (Division I), and IX of the 1986 edition of the "American Society of Mechanical Engineers Boiler and Pressure Vessel Code" and addenda thereto through June 30, 1985".

(2) AAR Specifications for Tank Cars means the 1985 edition of the "Association of American Railroads Specifications for Tank Cars, Specification M-1002".

(3) Compressed Gas Association:

(i) CGA Pamphlet C-3 is titled, "Standards for Welding and Brazing on Thin Walled Containers," 1968 edition;

(ii) CGA Pamphlet C-6, is titled, "Standards for Visual Inspection of Steel Compressed Gas Cylinders," 1984 edition.

(iii) CGA Pamphlet C-7 is titled, "Guide to the Preparation of Precautionary Labeling and Marking of Compressed Gas Containers," 1983 edition including Appendix A issued April 15, 1983.

(iv) CGA Pamphlet C-8, is titled, "Standard for Requalification of DOT-3HT Seamless Steel Cylinders," 1985 edition.

(v) CGA Pamphlet S-1.2 is titled, "Pressure Relief Device Standards, Part 2, Cargo and Portable Tanks for Compressed Gases," 1980 edition;

(vi) CGA Pamphlet S-1.1 is titled, "Pressure Relief Device Standards Part 1—Cylinders for Compressed Gases," 1979 edition.

(vii) CGA Pamphlet C-12 is titled, "Qualification Procedure for Acetylene Cylinder Design," 1979 edition.

(viii) CGA Pamphlet C-14 is titled "Procedures for Fire Testing of DOT Cylinder Pressure Relief Device Systems," 1979 edition.

(ix) CGA Pamphlet G-4.1 is titled, "Cleaning Equipment for Oxygen Service," 1985 edition.

(x) CGA Pamphlet G-2.2 is titled, "Guideline Method for Determining Minimum of 0.2% Water in Anhydrous Ammonia," 1985 edition.

(xi) CGA Technical Bulletin TB-2 is titled, "Guidelines for Inspection and Repair of MC-330 and MC-331 Cargo Tanks," 1980 edition.

(xii) CGA Pamphlet C-6.1 is titled, "Standards for Visual Inspection of Aluminum Compressed Gas Cylinders," 1984 edition.

(4) American National Standards:

(i) American National Standard B9.1, is titled, "Safety Code for Mechanical Refrigeration," 1964 edition.

(ii) American National Standard B16.5 is titled, "Steel Pipe Flanges and Fittings," 1968 edition.

(iii) American National Standard N14.1 is titled, "Packaging of Uranium Hexafluoride for Transport," 1982 edition.

(5) American Society for Testing and Materials:

(i) ASTM D1310 is titled, "Standard Method of Test for Flash Point of Volatile Flammable Materials By Tag Open-Cup Apparatus," 1967 edition;

(ii) ASTM D323 is titled, "Test for Vapor Pressure of Petroleum Products (Reid Method)," 1968 edition.

(iii) ASTM D1056 is titled, "Sponge and Expanded Cellular Rubber Products, Spec. and Tests for," 1968 edition.

(iv) ASTM G 23-69 is titled, "Standard Recommended Practice for Operating Light- and Water-Exposure Apparatus (Carbon-Arc Type) for Exposure of Nonmetallic Materials," 1969 edition (reapproved 1975).

(v) ASTM G 26-70 is titled, "Standard Recommended Practice for Operating Light- and Water-Exposure Apparatus (Xenon-Arc Type) for Exposure of Nonmetallic Materials," 1970 edition.

(vi) ASTM D-638 is titled, "Test for Tensile Strength of Plastics", 1976 edition.

(vii) ASTM D-1505 is titled, "Test for Density of Plastics by the Density Gradient Technique", 1968 edition.

(viii) ASTM C148-77 is titled, "Standard Methods of Polariscopic Examination of Glass Containers," 1977 edition.

(ix) ASTM E487-74 is titled, "Standard Test Method for Constant-Temperature Stability of Chemical Materials," 1974 edition.

(x) ASTM B 557-79 is titled "Tension Testing Wrought and Cast Aluminum and Magnesium—Alloy Products" 1979 Edition.

(xi) ASTM B-221-76 is titled "Standard Specification for Aluminum Alloy Extruded Bars, Rods, Shapes and Tubes," 1976 Edition.

(xii) ASTM E 290-77 is titled "Semi-Guided Bend Test for Ductility of Metallic Materials," 1977 edition.

(xiii) ASTM D56-79 is titled "Standard Method of Test for Flash Point by Tag Closed Tester," 1979 edition.

(xiv) ASTM D3278-78 is titled "Standard Methods of Test for Flash Point of Liquids by Setaflash Closed Tester," 1978 edition.

(xv) ASTM D93-80 is titled "Standard Method of Test for Flash Point by Pensky-Martens Closed Tester," 1980 edition.

(xvi) ASTM 88-56 is titled "Standard Method of Test for Saybolt Viscosity," 1956 edition (reapproved 1968).

(xvii) ASTM D2161-79 is titled "Standard Method for Conversion of Kinematic Viscosity to Saybolt Universal Viscosity or to Saybolt Furol Viscosity," 1979 edition.

(xviii) ASTM D445-79 is titled "Standard Test Method for Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity," 1979 edition.

(xix) ASTM A 20-81 is titled, "Standard Specification for General Requirements for Steel Plates for Pressure Vessels," revision C, 1982 edition.

(xx) ASTM A 240-82 is titled, "Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip for Fusion-Welded Unfired Pressure Vessels," revision A, 1982 edition.

(xxi) ASTM A 370-77 is titled, "Standard Methods and Definition for Mechanical Testing of Steel Products," 1982 edition.

(xxii) ASTM A 516-79b is titled, "Standard Specification for Pressure Vessel Plates, Carbon Steel, for Moderate- and Lower-Temperature Service," 1982 edition.

(xxiii) ASTM A 537-80 is titled "Standard Specification for Pressure Vessel Plates, Heat-Treated, Carbon-Manganese-Silicon Steel," 1982 edition.

(xxiv) ASTM A 242-81 is titled "Standard Specification for High-Strength Low-Alloy Structural Steel," 1981 edition.

(xxv) ASTM A 441-81 is titled "Standard Specification for High-Strength Low-Alloy Structural Manganese Vanadium Steel," 1981 edition.

(xxvi) ASTM A 514-81 is titled "Standard Specification for High-Yield-Strength, Quenched and Tempered Alloy Steel Plate, Suitable for Welding," 1981 edition.

(xxvii) ASTM A 572-82 is titled "Standard Specification for High-Strength Low-Alloy Columbium-Vanadium Steels of Structural Quality," 1982 edition.

(xxviii) ASTM A 588-81 is titled "Standard Specification for High-Strength Low-Alloy Structural Steel with 50 ksi Minimum Yield Point to 4 in. Thick," 1981 edition.

(xxix) ASTM A 606-75 (Reapproved 1981) "Standard Specification for Steel Sheet and Strip, Hot-Rolled and Cold-Rolled, High Strength, Low-Alloy, with Improved Atmospheric Corrosion Resistance," 1981 edition.

(xxx) ASTM A 607-75 is titled "Standard Specification for Sheet and Strip, Hot-Rolled and Cold-Rolled, High-Strength, Low-Alloy Columbium and/or Vanadium," 1975 edition.

(xxxi) ASTM A 633-79a is titled "Standard Specification for Normalized High-Strength Low-Alloy Structural Steel," 1979 edition.

(xxxii) ASTM A 715-81 is titled "Standard Specification for Steel Sheet and Strip, Hot-Rolled, High-Strength, Low-Alloy, with improved Formability," 1981 edition.

(xxxiii) ASTM B 580-79 is titled "Standard Specification for Anodic Oxide Coatings on Aluminum," 1979 edition.

(xxxiv) ASTM D 4359-84 is titled, "Standard Test Method for Determining Whether a Material is a Liquid or a Solid," 1984 edition.

(6) NFPA Pamphlet No. 58 is titled, "Standard for the Storage and Handling of Liquefied Petroleum Gases," 1979 edition.

(7) Bureau of Explosives, Association of American Railroads:

(i) Bureau of Explosives Pamphlet No. 6 is titled, "Illustrating Methods for Loading and Bracing Carload and Less Than Carload Shipments of Explosives and Other Dangerous Articles," 1962 edition.

(ii) Bureau of Explosives Pamphlet No. 6A (includes Appendix No. 1, October 1944, and Appendix No. 2, December 1945) is titled, "Illustrating Methods for Loading and Bracing Carload and Less Than Carload Shipments of Loaded Projectiles, Loaded Bombs, Etc.," 1943 edition.

(iii) Bureau of Explosives Pamphlet No. 6C is titled, "Illustrating Methods for Loading and Bracing Trailers and Less-Than Trailer Shipments of Explosives and Other Dangerous Articles Via Trailer-on-Flat-Car (TOFC) or Container-on-Flat-Car (COFC)," September 1968.

(iv) Bureau of Explosives Pamphlets 1 and 2 titled, "Emergency Handling of Hazardous Materials in Surface Transportation," June 1973.

(8) NACE Standard TM-01-69 is titled, "Test Method Laboratory Corrosion Testing of Metals for the Process Industries," 1969 edition.

(9) IME Safety Library Publication No. 22 (IME Standard 22) is titled, "Recommendations for the Safe Transportation of Detonators in a Vehicle With Certain Other Explosive Materials." Revised January 1, 1985.

(10) IAEA "Regulations for the Safe Transport of Radioactive Materials, Safety Series No. 6, 1973 Revised Edition (as amended)."

(11) United States Nuclear Regulatory Commission (USNRC) 10 CFR Part 71, "Packaging of Radioactive Material for Transport and Transportation of Radioactive Material Under Certain Conditions."

(12) Federal Standard H28 is titled, "Screw-Thread Standards for Federal Services," March 31, 1978, edition.

(13) National Wooden Box Association's Specification 1-1B is titled "Specifications for Nailed Wooden and Lock Corner Boxes for Industrial Use," May 1958. Amended in part October 1961.

(14) American Water Works Association (AWWA) Standard C207-55 is titled, "AWWA Standard for Steel Pipe Flanges," 1955 edition.

(15) American Welding Society (AWS):

(i) AWS Code B-3.0 is titled, "Standard Qualification Procedure," 1972 edition.

(ii) AWS Code D-1.0 is titled, "Code for Welding in Building Construction," 1966 edition.

(16) USDC, CAPE-1662, one of the series of "Civilian Applications Program Engineering Drawings" which is a package of information including drawings and bills of material, describing phenolic-foam insulated, protective overpacks.

(i) USDC, USDOE Material and Equipment Specification No. SP-9, Rev. 1, and Supplement, is titled "Fire Resistant Phenolic Foam."

(ii) USDC, ORO-651 is titled, "Uranium Hexafluoride Handling Procedures and Container Criteria," Revision 3, 1972 edition.

(17) "International Maritime Dangerous Goods Code" (IMDG Code), Volumes I, II, III, and IV, 1977 Edition, and Amendments 14-76, 15-77, 16-78, 17-79, 18-79, 19-80 and 20-82 thereto.

(18) "Uniform Freight Classification 11."

(19) Federal Specification RR-C-901 b is titled "Cylinders, Compressed Gas: With Valve or Plug and Cap; ICC 3AA, August 1, 1967."

(20) NIOSH Registry is titled, "Registry of Toxic Effects of Chemical Substances," 1978 edition, available from the Superintendent of Documents.

(21) United Nations Recommendations (UN Recommendations) is titled, "Recommendations for the Transport of Dangerous Goods, Fourth revised edition (1986)."

(22) SADT is titled, "Self Accelerating Decomposition Temperature Test," published by the OPPSD.

(23) USDOT, "Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials."

(24) "ISO 82-1974(e) Steel-Tensile Testing," First Edition 1974-08-01.

(25) Aluminum Associations' Handbook is titled "Aluminum Standards and Data," Sixth Edition, 1979.

(26) National Motor Freight Classification, NMF 100-I", 1982.

(27) International Civil Aviation Organization Technical Instructions for the Safe Transport of Dangerous Goods by Air, DOC 9284-AN/905 (ICAO Technical Instructions), 1987-88 edition.

(28) "Transportation of Dangerous Goods Regulations" of Transport Canada (TDG Regulations), amended as of July 1, 1985, (Incorporating Registration Numbers SOR/85-77, SOR/85-585 and SOR/85-609).

(e) Matters referenced by footnote are included as part of the regulations of this subchapter.

(f) The material listed in this section has been approved for incorporation by reference by the Director of the Federal Register. These materials are incorporated as they exist on the date of the approval and a notice of any change in these materials will be published in the FEDERAL REGISTER. The material incorporated by reference is available for inspection at the Office of the Federal Register Information Center, Room 8301, 1100 L Street, NW, Washington, DC 20408.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-4, 34 FR 18247, Nov. 14, 1969]

EDITORIAL NOTE: For Federal Register citations affecting § 171.7, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 171.8 Definitions and abbreviations.

In this subchapter,

"Approved" means approval issued or recognized by the Department unless otherwise specifically indicated in this subchapter.

"Atmospheric gases" means gases that are commercially derived through an air separation process. For purposes of this subchapter, "atmospheric gases" means argon, krypton, neon, nitrogen, oxygen and xenon.

"Away from" See § 176.83.

"Barge" means a non-selfpropelled vessel.

"Bottle" means a container having a neck of relatively smaller cross section than the body and an opening capable of holding a closure for retention of the contents.

"Break-bulk" means packages of hazardous materials that are handled individually, palletized, or unitized for purposes of transportation as opposed to bulk and containerized freight.

"Btu" means British thermal unit.

"Bulk packaging" means a packaging, other than a vessel or a barge, including a transport vehicle or freight container, in which hazardous materials are loaded with no intermediate form of containment and which has: (1) An internal volume greater than 450 liters (118.9 gallons) as a receptacle for a liquid; (2) a capacity greater than 400 kilograms (881.8 pounds) as a receptacle for a solid; or (3) a water capacity greater than 1000 pounds (453.6 kilograms) as a receptacle for a gas as defined in § 173.300.

"Bureau of Explosives" means the Bureau of Explosives (B of E) of the Association of American Railroads.

"C" means Celsius or Centigrade.

"Captain of the Port" means the Officer of the Coast Guard, under the command of a District Commander, so designated by the Commandant for the purpose of giving immediate direction to Coast Guard law enforcement activities within his assigned area or, with respect to remaining areas in his District not assigned to officers designated by the Commandant, the District Commander.

"Carfloat" means a vessel that operates on a short run on an irregular basis and serves one or more points in a port area as an extension of a rail line or highway over water, and does not operate in ocean, coastwise, or ferry service.

"Cargo aircraft only" means an aircraft that is used to transport cargo and is not engaged in carrying passengers.

"Cargo tank" means any tank permanently attached to or forming a part of any motor vehicle or any bulk liquid or compressed gas packaging not permanently attached to any motor vehicle which by reason of its size, construction, or attachment to a motor vehicle, is loaded or unloaded without being removed from the motor vehicle. Any packaging fabricated under specifications for cylinders is not a cargo tank.

"Cargo vessel" means: (1) Any vessel other than a passenger vessel; and

(2) Any ferry being operated under authority of a change of character certificate issued by a Coast Guard Officer-in-Charge, Marine Inspection.

"Carrier" means a person engaged in the transportation of passengers or property by:

(1) Land or water, as a common, contract, or private carrier, or

(2) Civil aircraft.

"CC" means closed-cup.

"Character of vessel" means the type of service in which the vessel is engaged at the time of carriage of a hazardous material.

"Class A explosives" See § 173.53.

"Class B explosives" See § 173.88.

"Class C explosives" See § 173.100.

"COFC" means container-on-flatcar.

"Combustible liquid" See § 173.115.

"Competent authority" means a national agency responsible under its national law for the control or regulation of a particular aspect of the transportation of hazardous materials (dangerous goods). The term "Appropriate authority", as used in the ICAO Technical Instructions, has the same meaning as "Competent Authority". The Director, Office of Hazardous Materials Transportation, Research and Special Programs Administration, is the United States Competent Authority for purposes of this subchapter and 46 CFR Parts 64 and 146.

"Compressed gas" See § 173.300.

"Consumer commodity" means a material that is packaged and distributed in a form intended or suitable for sale through retail sales agencies or instrumentalities for consumption by individuals for purposes of personal care or household use. This term also includes drugs and medicines.

"Containership" means a cargo vessel designed and constructed to transport, within specifically designed cells, portable tanks and freight containers which are lifted on and off with their contents intact.

"Corrosive material" See § 173.240.

"Crewmember" means a person assigned to perform duty in an aircraft during flight time.

Cryogenic liquid. See § 173.300(f).

"Cylinder" means a pressure vessel designed for pressures higher than 40 psia and having a circular cross section. It does not include a portable tank, multi-unit tank car tank, cargo tank, or tank car.

"District Commander" means the District Commander of the Coast Guard, or his authorized representative, who has jurisdiction in the particular geographical area.

"DOD" means the U.S. Department of Defense.

"Designated facility" means a hazardous waste treatment, storage, or disposal facility that has been designated on the manifest by the generator.

"Engine" means a locomotive propelled by any form of energy and used by a railroad.

"EPA" means U.S. Environmental Protection Agency.

"Etiologic agent" See § 173.386.

"F" means degree Fahrenheit.

"Ferry vessel" means a vessel which is limited in its use to the carriage of deck passengers or vehicles or both, operates on a short run on a frequent schedule between two points over the most direct water route, other than in ocean or coastwise service, and is offered as a public service of a type normally attributed to a bridge or tunnel.

"Filling density" has the following meanings:

(1) For compressed gases in cylinders, see § 173.304(a)(2) Table Note 1.

(2) For compressed gases in tank cars, see § 173.314(c) Table Note 1.

(3) For compressed gases in cargo tanks and portable tanks, see § 173.315(a) Table Note 1.

(4) For cryogenic liquids in cylinders, except hydrogen, see § 173.316(c)(1).

(5) For hydrogen, cryogenic liquid in cylinders, see § 173.316(c)(3) Table Note 1.

(6) For cryogenic liquids in cargo tanks, see § 173.318(f)(1).

(7) For cryogenic liquids in tank cars, see § 173.319(d)(1).

"Flammable gas" See § 173.300(b).

"Flammable liquid" See § 173.115 (a)(1).

"Flammable solid" See § 173.150.

"Flash point" means the minimum temperature at which a substance gives off flammable vapors which in contact with spark or flame will ignite. For liquids, see § 173.115 and for solids, see § 173.150.

"Freight container" means a reusable container having a volume of 64 cubic feet or more, designed and constructed to permit being lifted with its contents intact and intended primarily for containment of packages (in unit form) during transportation.

"Fuel tank" means a tank other than a cargo tank, used to transport flammable or combustible liquid, or compressed gas for the purpose of supplying fuel for propulsion of the transport vehicle to which it is attached, or for the operation of other equipment on the transport vehicle.

"Gross weight" means the weight of a packaging plus the weight of its contents.

"Hazardous material" means a substance or material, including a hazardous substance, which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated.

"Hazardous substance" for the purposes of this subchapter, means a material, including its mixtures and solutions, that—

(1) Is listed in the Appendix to § 172.101 of this subchapter;

(2) Is in a quantity, in one package, which equals or exceeds the reportable quantity (RQ) listed in the Appendix to § 172.101 of this subchapter; and

(3) When in a mixture or solution, is in a concentration by weight which equals or exceeds the concentration corresponding to the RQ of the material, as shown in the following table:

RQ pounds (kilograms)	Concentration by weight	
	Percent	PPM
5000 (2270)	10	100,000
1000 (454)	2	20,000
100 (45.4)	0.2	2,000
10 (4.54)	0.02	200
1 (0.454)	0.002	20

This definition does not apply to petroleum products that are lubricants or fuels (see 40 CFR 300.6).

"Hazardous waste", for the purposes of this chapter, means any material that is subject to the Hazardous Waste Manifest Requirements of the U.S. Environmental Protection Agency specified in 40 CFR Part 262.

"Hermetically sealed" means closed by fusion, gasketing, crimping, or equivalent means so that no gas or vapor can enter or escape.

"IAEA" means International Atomic Energy Agency.

"IATA" means International Air Transport Association.

"ICAO" means International Civil Aviation Organization.

"IM Tank Table" means the table (with preface) listing hazardous materials approved by the Director, OHMT for carriage in IM portable tanks

under special conditions specified therein.

"IMO" means International Maritime Organization.

"Intermodal container" means a freight container designed and constructed to permit it to be used interchangeably in two or more modes of transport.

"Intermodal portable tank" or "IM portable tank" means a specific class of portable tanks designed primarily for international intermodal use.

"Irritating material" See § 173.381.

"Limited quantity," when specified as such in a section applicable to a particular material, with the exception of Poison B materials, means the maximum amount of a hazardous material for which there is a specific labeling and packaging exception.

"Liquid" means a material that has a vertical flow of over 2 inches (50 mm) within a three minute period, or a material having one gram (lg) or more liquid separation, when determined in accordance with the procedures specified in ASTM D 4359-84, "Standard Test Method for Determining whether a Material is a Liquid or Solid," 1984 edition.

"Magnetic materials" See § 173.21(f).

"Magazine vessel" means a vessel used for the receiving, storing, or dispensing of explosives.

"Marking" means applying the descriptive name, instructions, cautions, weight, or specification marks or combination thereof required by this subchapter to be placed upon outside containers of hazardous materials.

"Mixture" means a material composed of more than one chemical compound or element.

"Mode" means any of the following transportation methods; rail, highway, air, or water.

"Motor vehicle" includes a vehicle, machine, tractor, trailer, or semitrailer, or any combination thereof, propelled or drawn by mechanical power and used upon the highways in the transportation of passengers or property. It does not include a vehicle, locomotive, or car operated exclusively on a rail or rails, or a trolley bus operated by electric power derived from a fixed overhead wire, furnishing local passenger transportation similar to street-railway service.

"Name of contents" means the proper shipping name as specified in § 172.101 or § 172.102 (when authorized).

"Navigable waters" means, for the purposes of this subchapter, waters of the United States, including the territorial seas.

"Net weight" means a measure of weight referring only to the contents of a package, and does not include the weight of any packaging material.

"Non-bulk packaging" means a packaging which has (1) an internal volume of 450 liters (118.9 gallons) or less as a receptacle for a liquid; (2) a capacity of 400 kilograms (881.8 pounds) or less as a receptacle for a solid; or (3) a water capacity of 1000 pounds (453.6 kilograms) or less as a receptacle for a gas as defined in § 173.300.

"N.O.S." means not otherwise specified.

"NPT" means an American Standard taper pipe thread in compliance with the requirements of Federal Standard H28, Part II, Section VII. See § 171.7(d)(12).

"NRC (non-reusable container)" means a container whose reuse is restricted in accordance with the provisions of § 173.28.

"Occupied caboose" means a rail car being used to transport non-passenger personnel.

"Officer in Charge, Marine Inspection" means a person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who under the supervision and direction of the Coast Guard District Commander is in charge of a designated inspection zone for the performance of duties with respect to the enforcement and administration of Title 52, Revised Statutes, acts amendatory thereof or supplemental thereto, rules and regulations thereunder, and the inspection required thereby.

"Operator" means a person who controls the use of an aircraft, vessel, or vehicle.

"Organic peroxide" See § 173.151.

"ORM" means Other Regulated Materials.

"Outage" or "ullage" means the amount by which a packaging falls short of being liquid full, usually expressed in percent by volume.

"Outside container" means the outermost enclosure used in transporting a hazardous material other than a freight container.

"Overpack" except when referenced to a packaging specified in Part 178 of this subchapter, means an enclosure that is used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages. "Overpack" does not include a freight container.

"Oxidizer" or "Oxidizing material" See § 173.151.

"Package" or "Outside Package" means a packaging plus its contents. For radioactive materials, see § 173.403 of this subchapter.

"Packaging" means the assembly of one or more containers and any other components necessary to assure compliance with the minimum packaging requirements of this subchapter and includes containers (other than freight containers or overpacks), portable tanks, cargo tanks, tank cars, and multi-unit tank car tanks. For radioactive materials, see § 173.403 of this subchapter.

"Passenger" (With respect to vessels and for the purposes of Part 176 only) means a person being carried on a vessel other than:

(1) The owner or his representative;

(2) The operator;

(3) A bona fide member of the crew engaged in the business of the vessel who has contributed no consideration for his carriage and who is paid for his services; or

(4) A guest who has not contributed any consideration directly or indirectly for his carriage.

"Passenger-carrying aircraft" means an aircraft that carries any person other than a crewmember, company employee, an authorized representative of the United States, or a person accompanying the shipment.

"Passenger vessel" means—(1) A vessel subject to any of the requirements of the International Convention for the Safety of Life at Sea, 1960, which carries more than 12 passengers;

(2) A cargo vessel documented under the laws of the United States and not subject to the Convention, which carries more than 16 passengers;

(3) A cargo vessel of any foreign nation that extends reciprocal privileges and is not subject to the Convention and which carries more than 16 passengers; and

(4) A vessel engaged in a ferry operation and which carries passengers.

"Person" means an individual, firm, co-partnership, corporation, company, association, or joint-stock association, and includes any trustee, receiver, assignee, or personal representative thereof.

"Placarded car" means a rail car which is placarded in accordance with the requirements of Part 172 of this subchapter except those cars displaying only the FUMIGATION placards as required by § 172.510.

"Poison A" See § 173.326.

"Poison B" See § 173.343.

"Portable tank" means a bulk packaging (except a cylinder having a water capacity of 1000 pounds or less) designed primarily to be loaded onto, or on, or temporarily attached to a transport vehicle or ship and equipped with skids, mountings, or accessories to facilitate handling of the tank by mechanical means. It does not include a cargo tank, tank car, multi-unit tank car tank, or trailer carrying 3AX, 3AAX, or 3T cylinders.

"Preferred route" or "Preferred highway" is a highway for shipment of "highway route controlled quantities" of radioactive materials so designated by a State routing agency, and any Interstate System highway for which an alternative highway has not been designated by such State agency as provided by § 177.825(b) of this subchapter.

"Private track" or "Private siding" means track located outside of a carrier's right-of-way, yard, or terminals where the carrier does not own the rails, ties, roadbed, or right-of-way and includes track or portion of track which is devoted to the purpose of its user either by lease or written agreement, in which case the lease or writ-

ten agreement is considered equivalent to ownership.

"Proper shipping name" means the name of the hazardous material shown in Roman print (not italics) in § 172.101 of this subchapter.

"P.s.i." or "psi" means pounds per square inch.

"P.s.i.a. or psia" means pounds per square inch absolute.

"P.s.i.g. or psig" means pounds per square inch gauge.

"Public vessel" means a vessel owned by and being used in the public service of the United States. It does not include a vessel owned by the United States and engaged in a trade or commercial service or a vessel under contract or charter to the United States.

"Pyrophoric liquid" See § 173.115.

"Pyrophoric solid" See § 173.150.

"Radioactive materials" See § 173.403 of this subchapter for definitions relating to radioactive materials.

"Railroad" means a person engaged in transportation by rail.

"Rail freight car" means a car designed to carry freight or non-passenger personnel by rail, and includes a box car, flat car, gondola car, hopper car, tank car, and occupied caboose.

"Reportable quantity (RQ)" for the purposes of this subchapter means the quantity specified in Column 3 of the Appendix to § 172.101 for any material identified in Column 1 of the Appendix.

"Research" means investigation of experimentation aimed at the discovery of new theories or laws and the discovery and interpretation of facts or revision of accepted theories or laws in the light of new facts.

"Residue" means the hazardous material remaining in a packaging, including a tank car, after its contents have been unloaded to the maximum extent practicable and before the packaging is either refilled or cleaned of hazardous material and purged to remove any hazardous vapors.

"RSPA" means the Research and Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590.

"SCF" (standard cubic foot) means one cubic foot of gas measured at 60° F. and 14.7 psia.

"Separated by a complete hold or compartment from" See § 176.83.

"Separated from" See § 176.83.

"Separated longitudinally by a complete hold or compartment from" See § 176.83.

"Sheathing" means a covering consisting of a smooth layer of wood placed over metal and secured to prevent any movement.

"Shipping paper" means a shipping order, bill of lading, manifest or other shipping document serving a similar purpose and containing the information required by §§ 172.202, 172.203 and 172.204.

"STC (single-trip container)" means a container that may not be refilled and reshipped after having been previously emptied, except as provided in § 173.28.

"Solid" means a material which has a vertical flow of two inches (50 mm) or less within a three-minute period, or a separation of one gram (lg) or less of liquid when determined in accordance with the procedures specified in ASTM D 4359-84 "Standard Test Method for Determining Whether a Material is a Liquid or Solid," 1984 edition.

"Solution" means any homogeneous liquid mixture of two or more chemical compounds or elements that will not undergo any segregation under conditions normal to transportation.

"Spontaneously combustible material (solid)" means a solid substance (including sludges and pastes) which may undergo spontaneous heating or self-ignition under conditions normally incident to transportation or which may upon contact with the atmosphere undergo an increase in temperature and ignite.

"State-designated route" means a preferred route selected in accordance with U.S. DOT "Guidelines for Selecting Preferred Highway Routes for Highway Route Controlled Quantity Shipments of Radioactive Materials" or an equivalent routing analysis which adequately considers overall risk to the public. Designation must have been preceded by substantive consultation with affected local jurisdictions and with any other affected States to ensure consideration of all

impacts and continuity of designated routes.

"State routing agency" means an entity (including a common agency of more than one State such as one established by Interstate compact) which is authorized to use State legal process pursuant to § 177.825 of this subchapter to impose routing requirements, enforceable by State agencies, on carriers of radioactive materials without regard to intrastate jurisdictional boundaries. This term also includes Indian tribal authorities which have police powers to regulate and enforce highway routing requirements within their lands.

"Stowage" means the act of placing hazardous materials on board a vessel.

"Strong outside container" means the outermost enclosure which provides protection against the unintentional release of its contents under conditions normally incident to transportation.

"Technical name" means a recognized chemical name currently used in scientific and technical handbooks, journals, and texts. Generic descriptions authorized for use as technical names are, Organic phosphate compound, Organic phosphorus compound, Organic phosphate compound mixture, Organic phosphorus compound mixture, Methyl parathion, and Parathion.

"TOFC" means trailer-on-flat-car.

"Trailership" means a vessel other than a carfloat, specifically equipped to handle highway vehicles, and fitted with installed securing devices to tie down each vehicle.

"Train" means one or more engines coupled with one or more rail cars, except during switching operations or where the operation is that of classifying and assembling rail cars within a railroad yard for the purpose of making or breaking up trains.

"Trainship" means a vessel other than a rail car ferry or carfloat, specifically equipped to transport railroad vehicles, and fitted with installed securing devices to tie down each vehicle.

"Transport vehicle" means a cargo-carrying vehicle such as an automobile, van, tractor, truck, semitrailer, tank car or rail car used for the transportation of cargo by any mode. Each cargo-carrying body (trailer, rail car, etc.) is a separate transport vehicle.

"UFC" means Uniform Freight Classification.

"Unit load device" means any type of freight container, aircraft container, aircraft pallet with a net, or aircraft pallet with a net over an igloo.

"United States" means the fifty States, the District of Columbia, the Commonwealth of Puerto Rico, the Virgin Islands, American Samoa, or Guam.

"Vessel" includes every description of watercraft, used or capable of being used as a means of transportation on the water.

"Viscous liquid" means a liquid material which has a measured viscosity in excess of 2500 centistokes at 25° C (77° F.) when determined in accordance with the procedures specified in ASTM Method D 445-72 "Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)" or ASTM Method D 1200-70 "Viscosity of Paints, Varnishes, and Lacquers by Ford Viscosity Cup."

"Volatility" refers to the relative rate of evaporation of materials to assume the vapor state.

"Water reactive material (solid)" means any solid substance (including sludges and pastes) which, by interaction with water, is likely to become spontaneously flammable or to give off flammable or toxic gases in dangerous quantities.

"Water resistant" means having a degree of resistance to permeability by and damage caused by water in liquid form.

"W.T." means watertight.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-32, 41 FR 15994, Apr. 15, 1976]

EDITORIAL NOTE: For Federal Register citations affecting § 171.8, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

EFFECTIVE DATE NOTE: At 52 FR 29527, Aug. 10, 1987, § 171.8 was amended by adding definitions for "Bulk packaging" and "Non-bulk packaging" in the appropriate alphabetical sequence and revising the definition of "Portable tank", effective February

1, 1988. For the convenience of the user, the superseded text is set forth below:

§ 171.8 Definitions and abbreviations.

* * * * *

"Portable tank" means any packaging (except a cylinder having a 1000-pound or less water capacity) over 110 U.S. gallons capacity and designed primarily to be loaded into or on or temporarily attached to a transport vehicle or ship, and equipped with skids, mounting, or accessories to facilitate handling of the tank by mechanical means. It does not include any cargo tank, tank car tank, tank of the DOT-106A or 110A type, or trailers carrying 3AX, 3AAX, or 3T cylinders.

* * * * *

§ 171.9 Rules of construction.

(a) In this subchapter, unless the context requires otherwise: (1) Words imparting the singular include the plural;

(2) Words imparting the plural include the singular; and

(3) Words imparting the masculine gender include the feminine;

(b) In this subchapter, the word: (1) "Shall" is used in an imperative sense;

(2) "Must" is used in an imperative sense;

(3) "Should" is used in a recommendatory sense;

(4) "May" is used in a permissive sense to state authority or permission to do the act described, and the words "no person may * * *" or "a person may not * * *" means that no person is required, authorized, or permitted to the act described; and

(5) "Includes" is used as a word of inclusion not limitation.

[Amdt. 171-32, 41 FR 15996, Apr. 15, 1976, as amended by Amdt. 171-32A, 41 FR 40630, Sept. 20, 1976]

§ 171.10 Flammable or combustible liquids in bulk on board vessels.

(a) Nothing in Parts 170-189 of this subchapter shall be construed as affecting the transportation of flammable or combustible liquids in bulk on board vessels which transportation is governed by the rules and regulations promulgated under R.S. 4417a; 46 U.S.C. 391a (46 CFR Part 146).

[29 FR 18653, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and amended by Amdt. 171-42, 43 FR 48643, Oct. 19, 1978]

§ 171.11 Use of ICAO Technical Instructions.

Notwithstanding the requirements of Parts 172 and 173 of this subchapter, a hazardous material may be transported by aircraft, and by motor vehicle either before or after being transported by aircraft, in accordance with the ICAO Technical Instructions if the hazardous material:

(a) Is packaged, marked, labeled, classified, described and certified on a shipping paper and otherwise in a condition for shipment as required by the ICAO Technical Instructions;

(b) Is within the quantity limits prescribed for transportation by either passenger-carrying or cargo aircraft, as appropriate, as specified in the ICAO Technical Instructions;

(c) Is not a forbidden material or package according to § 173.21 or Column (3) of the Table to § 172.101 of this subchapter; and,

(d) Fulfills the following additional requirements as applicable:

(1) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, is also a hazardous substance as defined in this subchapter:

(i) One of the following additional descriptions shall be entered, in parentheses, in association with the basic description on shipping papers and in association with the proper shipping name required to be marked on packages:

(A) The name of the hazardous substance as shown in the appendix to § 172.101 of this subchapter, unless the proper shipping name required by the ICAO Technical Instructions already includes the name of the hazardous substance; or

(B) For waste streams, the waste stream number; or

(C) For wastes which exhibit an EPA characteristic of ignitability, corrosivity, reactivity, or EP toxicity, the letters "EPA" followed by the word "ignitability", or "corrosivity", or "reactivity", or "EP toxicity", as appropriate *or* the corresponding "D" number, as appropriate.

(ii) The letters "RQ" shall be entered on the shipping paper either before or after the basic description required by the ICAO Technical Instructions and in association with the proper shipping name required to be marked on the package.

(2) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, is also a hazardous waste as defined in this subchapter:

(i) The word "Waste" must precede the proper shipping name on shipping papers and package markings; and

(ii) It must comply with § 172.205 with respect to the hazardous waste manifests.

(3) When a hazardous material is not subject to the requirements of the ICAO Technical Instructions, it must be transported as required by this subchapter.

(4) When a hazardous material, that is regulated by this subchapter for transportation by highway, is transported by motor vehicle on a public highway under the provisions of this section, the motor vehicle must be placarded in accordance with Subpart F of Part 172 of this subchapter and the shipping paper must include:

(i) With the exception of hazardous materials in ICAO Class 6.1, Packaging Group III, and in ICAO Class 9, the name of the DOT hazard class most closely corresponding to the ICAO Class in association with the basic description required by the ICAO Technical instructions unless the shipping name contains the key word or words of the hazard class of the material;

(ii) The letters "ORM-E" in association with the basic description for a material in ICAO Class 6.1, Packing Group III or in ICAO Class 9, that is also a hazardous substance;

(iii) The words "Dangerous When Wet" in association with the basic description when the Class 4, Division 4.3 label is required to be applied by the ICAO Technical Instructions; and

(iv) Should include an indication that the shipment is being made under the provisions of this section or the letters "ICAO."

(5) If a liquid or solid material in a package meets the definition of a poison according to this subchapter, and the fact that it is a poison is not disclosed in the shipping name or by a class entry, an indication that the material is a poison shall be entered on the shipping paper in association with the basic description. For transportation by motor vehicle, this indication must be made by entering the word "Poison" on the shipping paper in association with the basic description.

(6) For radioactive materials:

(i) Shipping papers for highway route controlled quantity radioactive materials shipments must meet the requirements of § 172.203(d)(1)(iii) of this subchapter,

(ii) Competent authority certification and any necessary revalidation for Type B, Type B(U), Type B(M), and fissile materials packages must be obtained from the appropriate authorities as specifed in §§ 173.471, 173.472 and 173.473 of this subchapter, and all requirements of the certificates and revalidations must be met,

(iii) The provisions of §§ 172.204(c)(4), 173.448 (e), (f) and (g)(3) of this subchapter apply,

(iv) Limited quantities of radioactive materials must meet the provisions of § 173.421, § 173.422 or § 173.424 as appropriate of this subchapter, and

(v) Type A package contents shall be limited in accordance with § 173.431 of this subchapter.

(7) If a United States variation is indicated in the ICAO Technical Instructions for any provision governing the transport of the hazardous material, the hazardous material is transported in conformance with that variation.

(8) Abbreviations may not be used in shipping paper entries or package markings unless they are specifically authorized by this subchapter. ICAO class or division numbers are not considered to be abbreviations.

(9) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, falls within the inhalation hazard criteria described in § 173.3a(b)(2):

(i) The shipping description must include the words "Poison-Inhalation Hazard", except that only the word "Poison" is required when the material is shipped in a combination packag-

ing with inner packagings containing one liter or less;

(ii) The material must be packaged in accordance with the requirements of § 173.3a; and,

(iii) The package must be marked and labelled in accordance with the requirements of §§ 172.301(a) and 172.402(a)(10).

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-69, 47 FR 54821, Dec. 6, 1982, as amended by Amdt. 171-71, 48 FR 10224, Mar. 10, 1983; Amdt. 171-71, 48 FR 31217, July 7, 1983; Amdt. 171-77, 48 FR 53712, Nov. 29, 1983; Amdt. 171-91, 51 FR 44791, Dec. 12, 1986; Amdt. 171-90, 52 FR 4825, Feb. 17, 1987]

§ 171.12 Import and export shipments.

(a) Except in the case of a shipment from Canada conforming to § 171.12a of this subchapter, each person importing a hazardous material into the United States shall provide the shipper and the forwarding agent at the place of entry into the United States timely and complete information as to the requirements of this subchapter that will apply to the shipment of the material within the United States. The shipper, directly or through the forwarding agent at the place of entry, shall provide the initial carrier in the United States the certificate of compliance required by § 172.204 of this subchapter. The carrier may not accept the material for transportation unless the required certification is provided.

(b) Except for Class A and Class B explosives and radioactive materials, a hazardous material which is classed and labeled in accordance with the conditions and limitations specified in § 172.102 of this subchapter when being imported into or exported from the United States, or passing through the United States in the course of being shipped between places outside the United States, may be offered and accepted for transportation and transported within the United States if it is otherwise offered, accepted, and transported in accordance with this subchapter. In addition, an appropriate shipping name specified for a material in § 172.102 of this subchapter may be substituted for its proper shipping name in § 172.101 of this subchapter (subject to the conditions and limitations of this paragraph and § 172.102 of this subchapter) if all or a portion of the transportation of the material is by vessel.

(c) The requirements of § 171.2 with respect to specification identification markings on packages notwithstanding, a package of hazardous materials (other than a compressed gas cylinder or a package of more than 110 gallons capacity) being imported into or exported from the United States or passing through the United States in the course of being shipped between places outside the United States may be offered and accepted for transportation and transported within the United States if the package specification identification markings required by Part 178 of this subchapter are clearly and legibly displayed on the surface of the package or on decals or tags securely affixed to the package, and the package is otherwise offered, accepted, and transported in accordance with this subchapter.

(d) Section 171.2 notwithstanding, a hazardous material (other than Class A or B explosives or radioactive materials) being imported into or exported from the United States or passing through the United States in the course of being shipped between places outside the United States may be offered and accepted for transportation and transported by motor vehicle within a single port area (including contiguous harbors) when packaged, marked, classed and labeled in accordance with the IMDG Code, if the hazardous material is offered and accepted in accordance with the requirements of Subparts C and F of Part 172 of this subchapter pertaining to shipping papers and placarding. (See § 176.11 of this subchapter for exceptions applicable to vessels.)

(e) Radioactive materials being imported into or exported from the United States, or passing through the United States in the course of being shipped between places outside the United States, may be offered and accepted for transportation when packaged, marked, labeled and otherwise prepared for shipment in accordance with IAEA "Regulations for the Safe

Transport of Radioactive Materials, Safety Series No. 6, 1973 Revised Edition (as amended)", if:

(1) Highway route controlled quantities (see § 173.403 of this subchapter) are shipped in accordance with §§ 172.203(d)(1)(iii), 172.507, 173.22(c), and 177.825 of this subchapter;

(2) For fissile materials and Type B packages, the competent authority certification and any necessary revalidation is obtained from the appropriate competent authorites as specified in §§ 173.471, 173.472 and 173.473 of this subchapter; and all requirements of the certificates and revalidations are met;

(3) Type A package contents shall be limited in accordance with § 173.431 of this subchapter;

(4) The country of origin for the shipment has adopted the IAEA "Regulations for the Safe Transport of Radioactive Materials, Safety Series No. 6, 1973, Revised Edition (as amended)"; and

(5) The requirements of § 173.448(e), (f), and (g)(3) of this subchapter are fulfilled, when applicable.

(f) The provisions of paragraphs (b) and (d) of this section also apply to transportation, a portion of which includes transportation by vessel, between points in a State or between States.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-32, 41 FR 15996, Apr. 15, 1976]

EDITORIAL NOTE: For Federal Register citations affecting § 171.12, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 171.12a Canadian shipments and packagings.

(a) Notwithstanding the requirements of Part 172 and 173 of this subchapter, and except as provided in paragraph (b) of this section, a hazardous material that is classed, packaged, marked, labeled, placarded and described on a shipping paper in accordance with the Regulations Respecting the Handling, Offering for Transport and Transporting of Dangerous Goods (the Transportation of Dangerous Goods Regulations or TDG Regulations), issued by the Government of Canada, may be transported by rail or highway from the point of entry in the United States to its destination in the United States, or through the United States en route to a point in Canada, provided that it fulfills the following additional requirements as applicable:

(1) When a hazardous material is not subject to the requirements of the TDG Regulations, it must be transported as required by this subchapter.

(2) When a hazardous material, that is subject to this subchapter for transportation by rail or highway is transported under the provisions of this section, the shipping paper must include the following:

(i) The words "Dangerous When Wet" in association with the basic description when the Class 4, Division 4.3 label is required to be applied by the TDG Regulations.

(ii) The words "Poison" in association with the basic description if a liquid or solid material in a packaging meets the definition of a poison according to this subchapter, and the fact that it is a poison is not disclosed in the shipping name or by a class entry.

(3) When a hazardous material which is subject to the requirements of the TDG Regulations is also a hazardous substance as defined in this subchapter, the additional description requirements for hazardous substances in §§ 172.203(c) and 172.324 are applicable.

(4) When a hazardous material, which is subject to the requirements of the TDG Regulations, is also a hazardous waste as defined in this subchapter:

(i) The word "Waste" must precede the proper shipping name on shipping papers and package markings; and

(ii) It must be accompanied by a hazardous waste manifest executed as required by § 172.205 of this subchapter.

(5) Required shipping paper entries and package markings must be in English. Abbreviations may not be used in shipping paper entries or package markings unless they are specifically authorized by this subchapter. TDG Regulations class or division numbers are not considered to be abbreviations. Hazardous materials identification numbers must be preceded by "UN" or

"NA". The use of an identification number preceded by "PIN" is not authorized.

(6) Shipments of radioactive materials must conform to the requirements of § 171.12(e).

(b) This section does not apply to:

(1) A material which is a forbidden material according to § 173.21 of this subchapter, or as indicated in Column (3) of the Table § 172.101 of this subchapter;

(2) A material or article meeting the definition of a Class A, B or C explosive according to this subchapter, except that, notwithstanding the requirements of Part 172 of this subchapter:

(i) For transportation between the United States and Canada, a package may be labeled and a freight container, motor vehicle or rail car placarded, with the label and placard required by the TDG Regulations provided that label or placard also indicates the appropriate DOT hazard class in accordance with Schedule V of the TDG Regulations;

(ii) Explosives may be transported from the point of entry in the United States to their destination in the United States, or through the United States en route to a point in Canada, when described on a shipping paper in accordance with the TDG Regulations provided the shipping paper also includes the letters "DOT:" followed by the proper shipping name and hazard class prescribed for explosives in this subchapter.

(c) Notwithstanding the requirements of Part 172 of this subchapter, a hazardous material included in Division 3 or 4 of Class 2 of the TDG Regulations may be transported from its point of origin in the United States to Canada, or through the United States en route to a point in Canada, if—

(1) The package is marked with the proper shipping name and identification number, and the freight container is marked, when appropriate, with the identification number, as required by the TDG Regulations;

(2) The package is labeled, and the freight container, motor vehicle or rail car is placarded, as required by the TDG Regulations; and,

(3) The shipping paper contains an indication that these markings, labels and placards have been applied in conformance with this paragraph for the purpose of transport to Canada.

(d) Except as specified in 173.301(i) of this subchapter, specification packagings made and maintained in full compliance with the corresponding specifications prescribed by the Railway Transport Committee of the Canadian Transport Commission (formerly the Board of Transport Commissioner for Canada), in its Regulations for the Transportation of Dangerous Commodities by Rail, and marked in accordance therewith (e.g., BTC, CTC, etc.) may be used for the shipment of hazardous materials within the United States.

(e) For transportation by rail, hazardous materials transported in accordance with paragraph (a) of this section may, in addition, be packaged and otherwise transported in conformance with the regulations of the Canadian Transport Commission from the point of entry in the United States to their destination in the United States, or through the United States en route to a point in Canada. Subject to the conditions and limitations of paragraphs (a) and (b) of this section, empty rail tank cars may be transported in conformity with Canadian Transport Commission regulations from point of origin in the United States to point of entry into Canada.

(f) Except as provided in paragraphs (a) and (d) of this section, hazardous materials transported by highway in accordance with this section must be packaged and otherwise transported as required by this subchapter. Subject to the conditions and limitations of paragraphs (a) and (b) of this section, empty cargo tanks may be returned to Canada in conformance with TDG Regulations provided they are otherwise transported as required by this subchapter.

[Amdt. 171-83, 50 FR 41520, Oct. 11, 1985, as amended by Amdt. 171-87, 51 FR 23075, June 25, 1986; Amdt. 171-90, 52 FR 4825, Feb. 17, 1987]

§ 171.13 Emergency regulations.

(a) Until further order of the Department, shipments of explosives may be made upon requests of the Departments of the Army, Navy, and Air Force of the United States Government complying with the following:

(1) Shippers' and carriers' regulations; handling detonating agents and explosives and explosive ammunition in same car or vehicle. Detonating fuzes, class A explosives, primer-detonator assemblies or other detonating elements containing explosive components, if of a safe type, may be shipped either assembled in bombs, depth charges, mines, projectiles, or torpedoes (torpedo warheads) or in properly packed containers in the same car or vehicle with bombs, depth charges, mines, projectiles, boosters, or torpedoes (torpedo warheads) when separated from the explosive bombs, depth charges, mines, projectiles, boosters, or torpedoes (torpedo warheads) by not less than 3 feet. The intervening space of 3 feet must be filled with dry sand or dry earth in bags or in a crib so constructed or lined as to prevent sifting of the sand or earth. The crib must be secured against movement.

(2) When bomb fuzes are packed with bomb fin assemblies, either crated or boxed in wooden or metal containers, the sand or earth filled space between bombs and the fuzes may be omitted provided adequate blocking and bracing is supplied to prevent the bombs from crushing and injuring the detonating fuzes due to ordinary shocks incident to transportation.

[29 FR 18653, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967]

§ 171.14 Specification markings.

(a) Notwithstanding any other requirements of Parts 170-189 of this subchapter, the letters "ICC" may continue to be placed on any packaging requiring specification markings until January 1, 1970.

(b) Packagings with the specification markings "ICC" placed thereon before January 1, 1970, may be continued in service as marked.

[Amdt. 171-2, 33 FR 17918, Dec. 3, 1968, as amended by Amdt. 171-42, 43 FR 48643, Oct. 19, 1978]

§ 171.15 Immediate notice of certain hazardous materials incidents.

(a) At the earliest practicable moment, each carrier who transports hazardous materials (including hazardous wastes) shall give notice in accordance with paragraph (b) of this section after each incident that occurs during the course of transportation (including loading, unloading and temporary storage) in which as a direct result of hazardous materials:

(1) A person is killed;

(2) A person receives injuries requiring his hospitalization;

(3) Estimated carrier or other property damage exceeds $50,000;

(4) Fire, breakage, spillage, or suspected radioactive contamination occurs involving shipment of radioactive material. (See also §§ 174.45, 175.45, 176.48, and 177.807 of this subchapter.); or

(5) Fire, breakage, spillage, or suspected contamination occurs involving shipment of etiologic agents; or

(6) A situation exists of such a nature that, in the judgment of the carrier, it should be reported in accordance with paragraph (b) of this section even though it does not meet the criteria of paragraph (a)(1), (2), or (3) of this section; e.g., a continuing danger to life exists at the scene of the incident.

(b) Each notice required by paragraph (a) of this section shall be given to the Department by telephone (toll-free) on 800-424-8802. Notice involving etiologic agents may be given the Director, Center for Disease Control, U.S. Public Health Service, Atlanta, Ga., Area Code (404) 633-5313, in place of the notice to the Department or (toll call) on 202-267-2675. Each notice must include the following information:

(1) Name of reporter.

(2) Name and address of carrier represented by reporter.

(3) Phone number where reporter can be contacted.

(4) Date, time, and location of incident.

(5) The extent of injuries, if any.

(6) Classification, name, and quantity of hazardous materials involved, if such information is available.

(7) Type of incident and nature of hazardous material involvement and whether a continuing danger to life exists at the scene.

(c) Each carrier making a report under this section shall also make the report required by § 171.16.

NOTE: Under 40 CFR 302.6 EPA requires persons in charge of facilities (including transport vehicles, vessels, and aircraft) to report any release of a hazardous substance in a quantity equal to or greater than its reportable quantity, as soon as that person has knowledge of the release, to the U.S. Coast Guard National Response Center at (toll free) 800-424-8802 or (toll) 202-267-2675.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-7, 35 FR 16837, Oct. 3, 1970]

EDITORIAL NOTE: For Federal Register citations affecting § 171.15, see the List of CFR Sections Affected appearing in the Finding Aids section of this volume.

§ 171.16 Detailed hazardous materials incident reports.

(a) Each carrier who transports hazardous materials shall report in writing in duplicate on DOT Form F 5800.1[1] to the Department within 15 days of the date of discovery, each incident that occurs during the course of transportation (including loading, unloading, or temporary storage) in which, as a direct result of the hazardous materials, any of the circumstances set forth in § 171.15(a) occurs or there has been an unintentional release of hazardous materials from a package (including a tank) or any quantity of hazardous waste has been discharged during transportation. If a report pertains to a hazardous waste discharge:

(1) A copy of the hazardous waste manifest for the waste must be attached to the report, and

(2) An estimate of the quantity of the waste removed from the scene, the name and address of the facility to which it was taken, and the manner of disposition of any unremoved waste, must be entered in Part H of the report (Form F 5800.1).

(b) Each carrier making a report under this section shall send that report to the Information Systems Manager, Research and Special Programs Administration, Department of Transportation, Washington, D.C. 20590.

(c) Except as provided in paragraph (d) of this section, the requirements of paragraph (a) of this section do not apply to incidents involving the unintentional release of hazardous materials being transported under the following proper shipping names:

(1) Consumer commodity.

(2) Battery, *electric storage*, wet, filled with acid *or* alkali.

(3) Paint and paint related material when shipped in packagings of five gallons or less.

(d) The exceptions to incident reporting provided in paragraph (c) of this section do not apply to:

(1) Incidents required to be reported under § 171.15(a);

(2) Incidents involving transportation aboard aircraft; nor

(3) Incidents involving the transportation of hazardous waste.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-7, 35 FR 16837, Oct. 3, 1970, as amended by Amdt. 171-56, 45 FR 73683, Nov. 6, 1980; Amdt. 171-57, 45 FR 80829, Dec. 8, 1980; Amdt. No. 171-65, 47 FR 24584, June 7, 1982; Amdt. 171-66, 47 FR 43064, Sept. 30, 1982; Amdt. 171-72, 48 FR 17095, Apr. 21, 1983]

§ 171.17 [Reserved]

§ 171.18 Continuation of effectiveness of existing Bureau of Explosives registrations.

A registration filed with the Bureau of Explosives in compliance with a requirement of the subchapter, which is valid at the time that registration function is assumed by RSPA remains valid to the same extent as if it had been filed originally with RSPA.

(49 U.S.C. 1803, 1804, 1808; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-50, 44 FR 55577, Sept. 27, 1979]

[1] Filed as part of the original document.

§ 171.19 Approvals or authorizations issued by the Bureau of Explosives.

Unless otherwise specifically restricted by other requirements of this subchapter, any written approval or authorization issued by the Bureau of Explosives that is valid at the time the Bureau of Explosives authority to issue that approval or authorization is withdrawn or assumed by the Director, OHMT and which is available for inspection by representatives of the Department of Transportation, will be considered as having the same validity as if issued by the Director, OHMT, and remains valid under the conditions and for the period established by the Bureau of Explosives.

(49 U.S.C. 1803, 1804, 1808, and 1809; 49 CFR 1.53, App. A to Part 1)

[Amdt. 171-70, 48 FR 2655, Jan. 20, 1983]

§ 171.20 Submission of Examination Reports.

(a) When it is required in this subchapter that the issuance of an approval by the Director, OHMT be based on an examination by the Bureau of Explosives (or any other test facility recognized by RSPA), it is the responsibility of the applicant to submit the results of the examination to the Director, OHMT.

(b) Applications for approval submitted under paragraph (a) of this section, must be submitted to the Director, Office of Hazardous Materials Transportation, Research and Special Programs Administration, Washington, DC 20590.

(c) Any applicant for an approval aggrieved by an action taken by the Director, OHMT, under this subpart may file an appeal with the Administrator, RSPA within 30 days of service of notification of a denial.

[Amdt. 171-54, 45 FR 32692, May 19, 1980, as amended by Amdt. 171-66, 47 FR 43064, Sept. 30, 1982]

PART 172—HAZARDOUS MATERIALS TABLES AND HAZARDOUS MATERIALS COMMUNICATIONS REGULATIONS

Subpart A—General

Subpart B—Tables of Hazardous Materials, Their Description, Proper Shipping Name, Class, Label, Packaging, and Other Requirements

Subpart C—Shipping Papers

Subpart D—Marking

AUTHORITY: 49 App. U.S.C. 1803, 1804, 1805, 1808; 49 CFR Part 1.

SOURCE: Amdt. 172-29, 41 FR 15996, Apr. 15, 1976, unless otherwise noted.

Subpart A—General

§ 172.1 Purpose and scope.

This part lists and classifies those materials which the Department of Transportation has designated as hazardous materials for purposes of transportation and prescribes the requirements for shipping papers, package marking, labeling, and transport vehicle placarding applicable to the shipment and transportation of those hazardous materials.

[Amdt. 172-29, 41 FR 15997, Apr. 15, 1976]

§ 172.3 Applicability.

(a) This part applies to—(1) Each person who offers a hazardous material for transportation, and

(2) Each carrier by air, highway, rail, or water who transports a hazardous material.

(b) When a person, other than one of those provided for in paragraph (a) of this section, performs a packaging labeling or marking function required by this part, that person shall perform

the function in accordance with this part.

[Amdt. 172-29, 41 FR 15996, Apr. 15, 1976, as amended by Amdt. 172-32, 41 FR 38179, Sept. 9, 1976]

Subpart B—Tables of Hazardous Materials, Their Description, Proper Shipping Name, Class, Label, Packaging, and Other Requirements

§ 172.101 Purpose and use of hazardous materials table.

(a) The Hazardous Materials Table (Table) in this section designates the materials listed therein as hazardous materials for the purpose of transportation of those materials in commerce. The Table identifies the class of each listed material, and specifies or references requirements in this subchapter pertaining to its packaging, labeling, and transportation. However, those references do not include other requirements having general applicability such as those specified in Parts 171 and 172, and Subparts A and B of Part 173, of this subchapter.

(b) Column 1 contains the three symbols as appropriate: Plus (+) and the letters "A" and "W".

(1) The plus (+) fixes the proper shipping name and the hazard class for that entry without regard to whether the material meets the definition of that class. An alternate proper shipping name and hazard class may be authorized by the Director, Office of Hazardous Materials Transportation, RSPA.

(2) A letter "A" restricts the application of this subchapter to materials offered or intended for transportation by aircraft, unless the material is a hazardous substance or a hazardous waste.

(3) The letter "W" restricts the application of this subchapter to materials offered or intended for transportation by vessel, unless the material is a hazardous substance or a hazardous waste.

(c) Column 2 lists the proper shipping name of materials designated as hazardous materials. Modification of a proper shipping name may otherwise be required or authorized by this section (see paragraphs (c)(10), (c)(11), (c)(12) and (c)(13) of this section). Proper shipping names are limited to those shown in Roman type (not italics).

(1) Shipping names may be used in the singular or plural and in either capital or lower case letters.

(2) The words in italics are not part of the proper shipping name but may be used in addition to the proper shipping name. The word "or" in italics indicates that any terms in the sequence may be used as the proper shipping name as appropriate.

(3) The abbreviation "n.o.i.", which means "not otherwise indexed", or "n.o.i.b.n.", which means "not otherwise indexed by name", may be used interchangeably with "n.o.s.".

(4) Except for hazardous wastes, when qualifying words are used as part of proper shipping name, their sequence on the package markings and shipping paper descriptions is optional. However, the entry in the Table reflects the preferred sequence.

(5) Except for organic peroxides, when one entry references another entry by use of the word *"see"*, if both names are in Roman type, either name may be used as the proper shipping name (e.g., Carbolic acid. *See* Phenol).

For an organic peroxide, the technical name shall be used as the proper shipping name.

(6) The words "poison" or "poisonous" in this column refer to materials that would cause death by systemic poisoning rather than by corrosive destruction of tissue.

(7) When a shipping name includes a concentration range as part of the shipping description, the actual concentration being shipped, if it is within the range stated, may be used in place of the concentration range. For example, a hydrogen peroxide solution containing 30% peroxide may be shipped as either "Hydrogen peroxide solution (8% to 40% peroxide)" or "Hydrogen peroxide solution, 30% peroxide".

(8) The use of the prefix "mono" is optional in any shipping name when appropriate. Thus, Monoethanolamine may be used interchangeably with Ethanolamine. In "Difluoromonochloroethane" the term "mono" is consid-

ered to be a prefix to the term "chloroethane" and may be deleted.

(9) *Hazardous substance.* The Appendix to this section lists materials which are listed or designated as hazardous substances under section 101(14) of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). Proper shipping names for hazardous substances (See Appendix and § 171.8 of this subchapter) shall be determined as follows:

(i) If the hazardous substance appears in the table by technical name, then the technical name is the proper shipping name.

(ii) If the hazardous substance does not appear in the table and is not a forbidden material (See §§ 173.21, 173.51, 183.86, and 173.114a of this subchapter), then an appropriate generic shipping name must be selected corresponding to the hazard class of the material as determined by the defining criteria of this subchapter and the hazard precedence prescribed in § 173.2 of this subchapter. For example, a hazardous substance which meets the definition of a flammable liquid might be described as "Flammable liquid, n.o.s." or other appropriate shipping name corresponding to the flammable liquid hazard class.

(10) If the word "waste" is not included in the hazardous material description in the Table, the proper shipping name for a hazardous waste must include the word "Waste" preceding the shipping name of the material. For example: Waste acetone.

(11) A mixture or solution comprised of a hazardous material identified in the Table by technical name and nonhazardous material may be described using the proper shipping name of the hazardous material, if:

(i) The mixture or solution is not specifically identified in the Table;

(ii) The hazard class of the mixture or solution is the same as that of the hazardous material, and

(iii) The qualifying word "mixture" or "solution", as appropriate, is added as part of the proper shipping name.

For example, a solution of Acetone, mineral oil, and water, meeting the definition of a flammable liquid, may be described under this optional provision as "Acetone solution. Flammable liquid, UN 1090."

(12) A material for which the hazard class is to be determined by testing or a material that is a hazardous waste may be assigned a tentative shipping name, hazard class and identification number, based on the shipper's tentative determination according to:

(i) Defining criteria in this subchapter;

(ii) The hazard precedence prescribed in § 173.2 of this subchapter; and

(iii) The shipper's knowledge of the material.

This paragraph does not apply to a material subject to or prohibited by §§ 173.21, 173.51, 173.86(d), 173.86(e)(1), and 173.114a(g)(2) of this subchapter.

(13) Except for proper shipping names in the Table that are preceded by a plus (+):

(i) If it is specifically determined that a material meets the definition of a hazard class other than the class shown in association with the proper shipping name, the material must be described by an appropriate shipping name listed in association with the correct class for the material or:

(ii) If an appropriate technical name is not shown in the Table, selection of a proper shipping name must be made from the general descriptions or n.o.s. entries corresponding to the specific hazard class of the material being shipped. The name that most appropriately describes the material must be used e.g., an alcohol not listed by name in the Table must be shipped as "Alcohol, n.o.s." rather than "Flammable liquid, n.o.s." Some mixtures may be more appropriately described according to their application, such as "Compound, cleaning, liquid" or "Compound rust removing," rather than by an n.o.s. entry, such as "Corrosive liquid, n.o.s."

(iii) If a material meets the definition of more than one hazard class, and is not specifically identified in the Table, the hazard class of the material must be determined by using the precedence specified in § 173.2 of this subchapter, and an appropriate shipping description must be selected as de-

scribed in paragraph (c)(13)(ii) of this section.

(iv) If it is specifically determined that a material is not a forbidden material and does not meet the definition of any hazard class, the material is not a hazardous material.

(d) Column 3 contains a designation of the hazard class corresponding to each proper shipping name, or the word "Forbidden".

(1) A material for which the entry in this column is "Forbidden" is prohibited from being offered or accepted for transportation. This prohibition does not apply if these materials are diluted, stabilized, or incorporated in devices and they are classed in accordance with the definitions of hazardous materials contained in Part 173 of this subchapter.

(2) When re-evaluation of test data or new data indicates a need to modify the "Forbidden" designation or the hazard class specified for a material specifically identified in the Table, this data should be submitted to the Director, Office of Hazardous Materials Transportation, RSPA.

(3) Notwithstanding the ORM class shown for a material in Column 3, such a material having a flash point of 100°F. to 200°F. is classed as Combustible liquid when in a packaging having a rated capacity of more than 110 gallons.

(e) Column 3(a) lists the identification numbers assigned to hazardous materials. Those preceded by a "UN" are associated with descriptions considered appropriate for international shipments as well as domestic shipments. Those preceded by an "NA" are associated with descriptions that are not recognized for international shipments, except to and from Canada. If an identification number is in the "NA9000" series, it is either associated with the description of a material that is not appropriately covered by international hazardous materials (dangerous goods) shipping standards or not appropriately addressed by such standards for emergency response information purposes, except for transportation between the United States and Canada.

(f) Column 4 specifies the labels required to be applied to each package, subject to the additional labeling requirements in § 172.402.

(g) Column 5 references the applicable packaging section of Part 173 of this subchapter. Exceptions from some of the requirements of this subchapter are noted in column 5(a); others are contained in §§ 171.3, 173.3, 173.4, and 173.5 of this subchapter in addition to those contained in Parts 174, 175, 176, and 177 of this subchapter. References to specific packaging requirements and certain additional exceptions are noted in column 5(b).

(1) Each reference to a section in Column 5(b) for an ORM A, B, or C that is a hazardous waste or a hazardous substance is modified to read § 173.510 if the section referenced is applicable only to a particular mode (or modes) and the material is transported by a mode not addressed in the section.

(h) Column 6 specifies the maximum net quantity in one package for transportation by aircraft or passenger railcar. In this column, "Forbidden" means the material may not be offered or carried and is limited in its applicability only to the types of transportation covered by the column. In addition, an exception for certain flammable liquids is provided in § 173.118 of this subchapter.

(1) Column 6(a) specifies the maximum net quantity permitted in one package for transportation by passenger-carrying aircraft or passenger railcar. For transportation by aircraft, any material forbidden on passenger-carrying aircraft but permitted on cargo aircraft, or which exceeds the maximum quantity authorized on passenger-carrying aircraft, must be shipped by cargo-only aircraft and bear the CARGO AIRCRAFT ONLY label as described in § 172.448.

(2) Column 6(b) specifies the maximum net quantity permitted in one package for transportation by cargo-only aircraft. When offered for transportation by aircraft, a package must bear the CARGO AIRCRAFT ONLY label when the quantity of hazardous material in one package exceeds that authorized on passenger-carrying aircraft, or is forbidden on passenger-carrying aircraft.

(i) Column 7 specifies each of the authorized locations on board cargo vessels and passenger vessels and certain additional requirements for shipments of each listed hazardous material. Section 176.63 of this subchapter sets forth the physical requirements for each of the authorized locations listed in Column 7. (For bulk shipments by vessel see 46 CFR Parts 30 to 40, 70, 98, 148, 151, 153, and 154.)

(1) "1" means the materials must be stowed "on deck" subject to the requirements of § 176.63(b) of this subchapter. When both "on deck" and "under deck" are authorized, "under deck" should be used if available.

(2) "1,2" means the material must be stowed either "on deck" or "under deck"; however, "under deck" should be used if available.

(3) "1,3" means the material must be stowed either "on deck" or "under deck away from heat"; however, "under deck away from heat" stowage should be used if it is available.

(4) "2" means the material must be stowed "under deck" in a compartment or hold subject to the requirements of § 176.63(c). When both "on deck" and "under deck" are authorized, "under deck" should be used if available.

(5) "3" means the material must be stowed "under deck away from heat" in a ventilated compartment or hold subject to the requirements of § 176.63(d) of this subchapter.

(6) "4" means the material is authorized to be transported in only the limited quantities specified in the CFR section listed in column 5 and is subject to the stowage requirements specified for a cargo vessel for the same material.

(7) "5" means the material is forbidden and may not be offered or accepted for transportation.

(8) "6" means the material is authorized to be transported in a magazine subject to the requirements of §§ 176.135 through 176.144 of this subchapter.

(j) Unless specifically stated otherwise in the amendement or the "Effective date" entry in its preamble, if any entry in this Table is changed by an amendment to this subchapter:

(1) Such a change does not apply to the shipment of any package filled prior to the effective date of the amendment; and

(2) Stocks of preprinted shipping papers and package markings may be continued in use, in the manner previously authorized, until depleted or for a one year period, whichever is less.

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) *Maximum* net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Accumulator, pressurized *(pneumatic or hydraulic), containing nonflammable gas*	Nonflammable gas	NA1956	Nonflammable gas	173.306		No limit	No limit	1,2	1,2	
	Acetal	Flammable liquid	UN1088	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Acetaldehyde *(ethyl aldehyde)*	Flammable liquid	UN1089	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
A	Acetaldehyde ammonia	ORM-A	UN1841	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Acetic acid *(aqueous solution)*	Corrosive material	UN2790	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	Stow separate from nitric acid or oxidizing materials
	Acetic acid, glacial	Corrosive material	UN2789	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	Stow separate from nitric acid or oxidizing materials
	Acetic anhydride	Corrosive material	UN1715	Corrosive	173.244	173.245	1 quart	1 gallon	1,2	1,2	
	Acetone	Flammable liquid	UN1090	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Acetone cyanohydrin	Poison B	UN1541	Poison	None	173.346 173.3a	Forbidden	55 gallons	1	5	Shade from radiant heat. Stow away from corrosive materials
	Acetone oil	Flammable liquid	UN1091	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Acetonitrile	Flammable liquid	NA1648	Flammable liquid	173.118	173.119	1 quart	10 gallons	1	4	Shade from radiant heat
	Acetyl acetone peroxide, *in solution with not more than 9% by weight active oxygen. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2080								
	Acetyl acetone peroxide with more than 9% by weight active oxygen	Forbidden									
	Acetyl benzoyl peroxide, *not more than 40% in solution. See* Acetyl benzoyl peroxide solution, *not over 40% peroxide*		UN2081								
	Acetyl benzoyl peroxide, solid, or more than 40% in solution	Forbidden									
	Acetyl benzoyl peroxide solution, *not over 40% peroxide*	Organic peroxide	UN2081	Organic peroxide	None	173.222	Forbidden	1 quart	1,2	1	
	Acetyl bromide	Corrosive material	UN1716	Corrosive	173.244	173.247	1 quart	1 gallon	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Acetyl chloride	Flammable liquid	UN1717	Flammable liquid	173.244	173.247	1 quart	1 gallon	1	1	Stow away from alcohols. Keep cool and dry. Separate longitudinally by an intervening complete compartment or hold from explosives

	Acetyl cyclohexanesulfonyl peroxide, more than 82%, wetted with less than 12% water	Forbidden									
	Acetyl cyclohexanesulphonyl peroxide, *not more than 82%, wetted with not less than 12% water. See* Organic peroxide, solid, n.o.s.		UN2082								
	Acetyl cyclohexanesulphonyl peroxide, *not more than 32% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2083								
	Acetylene	Flammable gas	UN1001	Flammable gas	None	173.303	Forbidden	300 pounds	1	1	Shade from radiant heat
	Acetylene (liquid)	Forbidden									
	Acetylene silver nitrate	Forbidden									
A	Acetylene tetrabromide	ORM-A	UN2504	None	173.505	173.510	10 gallons	55 gallons			
	Acetyl iodide	Corrosive material	UN1898	Corrosive	173.244	173.247	1 quart	1 gallon	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Acetyl peroxide, *not more than 25% in solution. See* Acetyl peroxide solution, *not over 25% peroxide*		UN2084								
	Acetyl peroxide, solid, or more than 25% in solution	Forbidden									
	Acetyl peroxide solution, *not over 25% peroxide*	Organic peroxide	UN2084	Organic peroxide	173.153	173.222	Forbidden	1 quart	1,2	1	
	Acid butyl phosphate	Corrosive material	UN1718	Corrosive	173.244	173.245	1 quart	5 gallons	1,2	1,2	Glass carboys in hampers not permitted under deck
	Acid carboy, empty. *See* Carboy, empty.										
	Acid, liquid, n.o.s.	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	5 pints	1	4	Keep cool
+	Acrolein, inhibited	Flammable liquid	UN1092	Flammable liquid and Poison	None	173.122	Forbidden	1 quart	1,2	5	Keep cool. Stow away from living quarters
	Acrylic acid	Corrosive material	UN2218	Corrosive	173.244	173.245	1 quart	5 pints	1	1	
	Acrylonitrile	Flammable liquid	UN1093	Flammable liquid and Poison	None	173.119	Forbidden	1 quart	1,2	5	Keep cool
	Actuating cartridge, explosive (*fire extinguisher, or valve*)	Class C explosive		Explosive C	173.114		50 pounds	150 pounds	1,2	1,2	Keep cool and dry
	Adhesive	Combustible liquid	UN1133	None	173.118a	None	No limit	No limit	1,2	1,2	
	Adhesive	Flammable liquid	UN1133	Flammable liquid	173.118	173.132	1 quart	10 gallons	1,2	1	
	Adipic acid		NA9077	None	None	173.510	No limit	No limit	1,2	1,2	
	Aerosol product. See Compressed gas, n.o.s.										
	Air, compressed	Nonflammable gas	UN1002	Nonflammable gas	173.306	173.302	150 pounds	300 pounds	1,2	1,2	
	Air conditioning machine. *See* Refrigerating machine										
	Air, refrigerated liquid (cryogenic liquid).	Nonflammable gas	UN1003	Nonflammable gas		173.316 173.318	Forbidden	300 pounds	1,2	1,2	Stow separate from flammables. Do not overstow with other cargo
	Airplane flare. See Fireworks, special										
	Alcoholic beverage	Flammable liquid	UN1170	Flammable liquid	173.118	173.125	See 173.118(C)	10 gallons	1,2	1	
	Alcoholic beverage	Combustible liquid	UN1170	None	173.118a	None	No limit	No limit	1,2	1,2	
	Alcohol, n.o.s.	Flammable liquid	UN1987	Flammable liquid	173.118	173.125	1 quart	10 gallons	1,2	1	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Alcohol, n.o.s.	Combustible liquid	UN1987	None	173.118a	None	No limit	No limit	1,2	1,2	
	Aldrin	Poison B	NA2761	Poison	173.364	173.376	50 pounds	200 pounds	1,2	1,2	
A	Aldrin, cast solid	ORM-A	NA2761	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Aldrin mixture, dry (*with more than 65% aldrin*)	Poison B	NA2761	Poison	173.364	173.376	50 pounds	200 pounds	1,2	1,2	
A	Aldrin mixture, dry, with 65% or less aldrin	ORM-A	NA2761	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Aldrin mixture, liquid (*with more than 60% aldrin*)	Poison B	NA2762	Poison	173.345	173.361	1 quart	55 gallons	1,2	1,2	If flash point less than 141 deg F, segregation same as for flammable liquids
A	Aldrin mixture, liquid, with 60% or less aldrin	ORM-A	NA2762	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Alkaline *(corrosive)* liquid, n.o.s.	Corrosive material	NA1719	Corrosive	173.244	173.249	1 quart	5 gallons	1,2	1,2	
	Alkanesulfonic acid	Corrosive material	UN2584	Corrosive	173.244	173.245	5 pints	1 gallon	1,2	1	
	Alkyl aluminum halides. See Pyrophoric liquid, n.o.s.										
A	Allethrin	ORM-A	NA2902	None	173.505	173.510	No limit	No limit			
	Allyl alcohol *(RQ-100/45.4)*	Flammable liquid	UN1098	Flammable liquid and Poison	None	173.119 173.3a	1 quart	10 gallons	1,2	1	
	Allyl bromide	Flammable liquid	UN1099	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,2	1	
	Allyl chloride	Flammable liquid	UN1100	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
	Allyl chlorocarbonate	Flammable liquid	UN1722	Flammable liquid	None	173.288	Forbidden	5 pints	1	5	Keep dry. Separate longitudinally by an intervening complete hold or compartment from explosives. Segregation same as for corrosive materials
	Allyl chloroformate. *See* Allyl chlorocarbonate										
	Allyl trichlorosilane	Corrosive material	UN1724	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Aluminum alkyl. *See* Pyrophoric liquid, n.o.s.										
	Aluminum bromide, anhydrous	Corrosive material	UN1725	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Aluminum chloride, anhydrous	Corrosive material	UN1726	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Aluminum dross, wet or hot. See 173.173	Forbidden									

	Aluminum hydride	Flammable solid	UN2463	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solid labeled Dangerous When Wet
	Aluminum, metallic, powder	Flammable solid	UN1396	Flammable solid	173.232	173.232	25 pounds	100 pounds	1,2	1,2	Keep dry. Segregation same as for flammable solids labeled dangerous when wet
	Aluminum nitrate	Oxidizer	UN1438	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Aluminum phosphate solution	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Aluminum phosphide	Flammable solid	UN1397	Flammable solid and Dangerous when wet	None	173.154	Forbidden	25 pounds	1,2	1,2	Stow away from acids and oxidizing materials
	Aluminum sulfate, solid		NA9078	None	None	173.510	No limit	No limit	1,2	1,2	
A	Aluminum sulfate solution	ORM-B	NA1760	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
	Amatol. See High explosive										
	2-(2-Aminoethoxy) ethanol	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	N-Aminoethylpiperazine	Corrosive material	UN2815	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Aminopropyldiethanolamine	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	N-Aminopropylmorpholine	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	bis (Aminopropyl) piperazine	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Ammonia, anhydrous	Nonflammable gas	UN1005	Nonflammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	4	Stow in well ventilated space
	Ammonia solution (*containing more than 44% ammonia*)	Nonflammable gas	UN2073	Nonflammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	4	Stow in well ventilated space
	Ammonia solution (containing 44% or less ammonia in water). See Ammonium hydroxide										
	Ammonium acetate		NA9079	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium arsenate, solid	Poison B	UN1546	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	Stow away from alkaline corrosives
	Ammonium azide	Forbidden									
	Ammonium benzoate		NA9080	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium bicarbonate		NA9081	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium bifluoride, solid *or* solution. *See* Ammonium hydrogen fluoride, solid *or* solution										
A	Ammonium bisulfite, solid	ORM-B	NA2693	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
	Ammonium bisulfite solution	Corrosive material	NA2693	Corrosive	173.244	173.245	1 quart	5 gallons	1,2	1,2	
	Ammonium bromate	Forbidden									
A	Ammonium carbamate	ORM-A	NA9083	None	173.505	173.510	50 pounds	No limit	1,2	1,2	Keep away from heat
A	Ammonium carbonate	ORM-A	NA9084	None	173.505	173.510	50 pounds	No limit	1,2	1,2	Keep away from heat, acids, alum and salts of iron or zinc
	Ammonium chlorate	Forbidden									
	Ammonium chloride		NA9085	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium chromate		NA9086	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium citrate, dibasic		NA9087	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium dichromate (*ammonium bichromate*)	Oxidizer	UN1439	Oxidizer	173.153	173.154 173.235	25 pounds	100 pounds	1,2	1,2	
A	Ammonium fluoborate	ORM-B	NA9088	None	None	173.510	25 pounds	100 pounds	1,2	1,2	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)		
					Packaging		Maximum net quantity in one package		Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
A	Ammonium fluoride	ORM-B	UN2505	None	173.505	173.800	25 pounds	100 pounds	1,2	1,2	
	Ammonium fulminate	Forbidden									
	Ammonium hydrogen fluoride, solid	Corrosive material	UN1727	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Ammonium hydrogen fluoride solution	Corrosive material	UN2817	Corrosive	173.244	173.245	1 quart	5 gallons	1,2	1,2	Keep dry
A	Ammonium hydrogen sulfate	ORM-B	UN2506	None	173.505	173.800	25 pounds	100 pounds			
A	Ammonium hydrosulfide solution	ORM-A	NA2683	None	173.505	173.605	10 gallons	55 gallons			
	Ammonium hydroxide (*containing notless than 12% but not more than 44% ammonia*)	Corrosive material	NA2672	Corrosive	173.244	173.245	2 gallons	2 gallons	1	4	
AW	Ammonium hydroxide (*containing less than 12% ammonia*)	ORM–A	NA2672	None	173.505	173.510	10 gallons	55 gallons	1	1	
	Ammonium nitrate-carbonate mixture	Oxidizer	UN2068	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate fertilizer, *containing no more than 0.2% carbon*	Oxidizer	UN2067	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate - fuel oil mixture. See High explosive										
	Ammonium nitrate-fuel oil mixture *(containing only prilled ammonium nitrate and fuel oil)*	Blasting agent		Blasting agent	None	173.114a	Fordidden	100pounds	1,2	1,2	
	Ammonium nitrate mixed fertilizer	Oxidizer	UN2069	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate (no organic coating)	Oxidizer	UN1942	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate (organic coating)	Oxidizer	NA1942	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate-phosphate	Oxidizer	UN2070	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ammonium nitrate, solution (*containing not less than 15% water). See 173.154(a)(17) and 173.154(a)(18)*	Oxidizer	UN2426	Oxidizer							
	Ammonium nitrite	Forbidden									
	Ammonium oxalate	ORM-A	NA2449	None	173.505	173.510	50 pounds	200 pounds	1,2	1,2	
	Ammonium perchlorate	Oxidizer	UN1442	Oxidizer	173.153	173.238a	25 pounds	100 pounds	1,2	4	Stow away from powdered metals
	Ammonium perchlorate. *See* High explosive										
	Ammonium permanganate	Oxidizer	NA9190	Oxidizer	None	173.154	Forbidden	Forbidden	1,2	1,2	Separate from ammonium compounds and hydrogen peroxide. This material may be forbidden in water transportation by certain countries
	Ammonium persulfate	Oxidizer	UN1444	Oxidizer	173.153	173.154	50 pounds	200 pounds	1,2	1,2	
	Ammonium picrate, dry. See High explosive										
	Ammonium picrate, wet (*with 10% or more water*)	Flammable solid	UN1310	Flammable solid	173.192		1 pound	1 pound	1	4	Stow away from heavy metals and their compounds

	Ammonium picrate, wet, with 10% or more water, over 16 ounces in one outside packaging. See High explosive										
A	Ammonium polysulfide solution	ORM-A	UN2818	None	173.505	173.605	10 gallons	55 gallons			
A	Ammonium silicofluoride	ORM-B	UN2854	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
	Ammonium sulfamate		NA9089	None	None	173.510	No limit	No limit	1,2	1,2	
W	Ammonium sulfate nitrate	ORM-C	NA1477	None	173.505	173.910			1,2	1,2	Must not be accepted for transportation while hot. Separate by an intervening hold or compartment from Class A explosives. Separate from other explosives, corrosive materials, flammable solids, liquids, or gases, oxidizing materials, organic peroxides, or organic materials
	Ammonium sulfide solution	Flammable liquid	UN2683	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	Ammonium sulfite		NA9090	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium tartrate		NA9091	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium thiocyanate		NA9092	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammonium thiosulfate		NA9093	None	None	173.510	No limit	No limit	1,2	1,2	
	Ammunition, chemical (containing a Poison A liquid or gas). See Chemical ammunition, nonexplosive (*containing a Poison A material*)										
	Ammunition, chemical (containing a Poison B material). See Chemical ammunition, nonexplosive (*containing a Poison B material*)										
	Ammunition, chemical (containing an irritating liquid or solid). See Chemical ammunition, nonexplosive (*containing an irritating material*)										
	Ammunition, chemical, explosive, with Poison A material	Class A explosive		Explosive A and Poisonous gas	None	173.59	Forbidden	Forbidden	6	5	No other cargo may be stowed in the same hold with these items
	Ammunition, chemical, explosive, with Poison B material	Class A explosive		Explosive A and Poison	None	173.59	Forbidden	Forbidden	6	5	No other cargo may be stowed in the same hold with these items
	Ammunition, chemical, explosive, with irritant	Class A explosive		Explosive A and Irritant	None	173.59	Forbidden	Forbidden	6	5	No other cargo may be stowed in the same hold with these items
	Ammunition for cannon with empty projectile	Class B explosive		Explosive B	None	173.89	Forbidden	Forbidden	1,2	5	
	Ammunition for cannon with explosive projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with gas projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with illuminating projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with incendiary projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with inert loaded projectile	Class B explosive		Explosive B	None	173.89	Forbidden	Forbidden	1,2	5	
	Ammunition for cannon without projectile	Class B explosive		Explosive B	None	173.89	Forbidden	Forbidden	1,2	5	
	Ammunition for cannon with smoke projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with solid projectile	Class B explosive		Explosive B	None	173.89	Forbidden	Forbidden	1,2	5	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Ammunition for cannon with tear gas projectile	Class A explosive		Explosive A	None	173.54	Forbidden	Forbidden	6	5	
	Ammunition for cannon with tear gas projectile	Class B explosive		Explosive B	None	173.89	Forbidden	Forbidden	1,2	5	
	Ammunition for small-arms with explosive projectile	Class A explosive		Explosive A	None	173.58	Forbidden	Forbidden	6	5	
	Ammunition for small-arms with incendiary projectile	Class A explosive		Explosive A	None	173.58	Forbidden	Forbidden	6	5	
	Ammunition, non-explosive. See 173.35										
	Ammunition, rocket. See Rocket ammunition with										
	Ammunition, small-arms. *See* Small-arms ammunition										
	Amyl acetate	Flammable liquid	UN1104	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	Amyl acid phosphate	Corrosive material	UN2819	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Amylamine	Flammable liquid	UN1106	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Amyl chloride	Flammable liquid	UN1107	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Amylene, *normal*	Flammable liquid	UN1108	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	1,3	
	Amyl formate	Flammable liquid	UN1109	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Amyl mercaptan	Flammable liquid	UN1111	Flammable liquid	None	173.141	Forbidden	10 gallons	1,2	1	
	Amyl nitrite	Flammable liquid	UN1113	Flammable liquid	173.118	173.119	1 quart	10gallons	1,3	4	
	tert-Amyl peroxy-2-ethylhexanoate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2698								
	tert-Amyl peroxyneodecanoate, *not more than 75% with phlegmatizer. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2891								
	Amyl trichorosilane	Corrosive material	UN1728	Corrosive	None	173.280	Forbidden	10 gallons	1	5	Keep dry
	Anhydrous ammonia. *See* Ammonia, anhydrous										
	Anhydrous hydrazine. *See* Hydrazine, anhydrous										

	Anhydrous hydrofluoric acid. *See* Hydrogen fluoride										
	Aniline oil drum, empty *See 173.347(d)*	Poison B							1,2	1	Do not accept unless returnable package notice is on drum and the instructions thereon have been carried out
+	Aniline oil, liquid	Poison B	UN1547	Poison	None	173.347	Forbidden	55 gallons	1,2	1,2	Stow away from oxidizing materials and acids
	Anisoyl chloride	Corrosive material	UN1729	Corrosive	173.244	173.279	1 quart	1 quart	1	1	Keep dry
	Antimonous chloride. *See* Antimony trichloride										
A	Antimony lactate, solid	ORM-A	UN1550	None	173.505	173.510	No limit	No limit			
	Antimony pentachloride	Corrosive material	UN1730	Corrosive	None	173.247	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Antimony pentachloride solution	Corrosive material	UN1731	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Antimony pentafluoride	Corrosive material	UN1732	Corrosive	None	173.248	Forbidden	25 pounds	1	5	Keep dry
A	Antimony potassium tartrate, solid	ORM-A	UN1551	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Antimony sulfide and a chlorate, mixtures of	Forbidden									
A	Antimony sulfide, solid	ORM-A	NA1325	None	173.505	173.510	No limit	No limit			
	Antimony tribromide, solid	Corrosive material	NA1549	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Antimony tribromide solution	Corrosive material	NA1549	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry
	Antimony trichloride, solid	Corrosive material	UN1733	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Antimony trichloride solution	Corrosive material	UN1733	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry
	Antimony trifluoride, solid	Corrosive material	NA1549	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Antimony trifluoride solution	Corrosive material	NA1549	Corrosive	173.244	173.245	1 quart	5 pints	1	1	Keep dry
	Antimony trioxide		NA9201	None	None	173.510	No limit	No limit	1,2	1,2	
	Aqua ammonia solution *(containing 44% or less ammonia)*. *See* Ammonium hydroxide										
	Argon *or* Argon, compressed	Nonflammable gas	UN1006	Nonflammable gas	173.306	173.302 173.314	150 pounds	300 pounds	1,2	1,3	
	Argon, refrigerated liquid (*cryogenic liquid*)	Nonflammable gas	UN1951	Nonflammable gas	173.320	173.316 173.318	100 pounds	1,100 pounds	1,3	1,3	
	Arsenic acid, solid	Poison B	UN1554	Poison	173.364	173.366	50 pounds	200 pounds	1,2	1,2	
	Arsenic acid solution	Poison B	UN1553	Poison	173.345	173.348	1 quart	55 gallons	1,2	1,2	
	Arsenical compound, liquid, n.o.s., *or* Arsenical mixture, liquid, n.o.s.	Poison B	UN1556	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Arsenical compound, solid, n.o.s., *or* Arsenical mixture, solid, n.o.s.	Poison B	UN1557	Poison	173.364	173.367	50 pounds	200 pounds	1,2	1,2	Keep dry
	Arsenical dip, liquid *(sheep dip)*	Poison B	NA1557	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Arsenical dust	Poison B	UN1562	Poison	173.364	173.368	50 pounds	200 pounds	1,2	1,2	
	Arsenical pesticide, liquid, n.o.s.(*compounds and preparations*),	Flammable liquid	UN2760	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Arsenical pesticide, liquid, n.o.s.(*compounds and preparations*),	Poison B	UN2759	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Arsenical pesticide, solid n.o.s.(*compounds and preparations*),	Poison B	UN2759	Poison	173.364	173.367	50 pounds	200 pounds	1,2	1,2	
	Arsenic bromide, solid	Poison B	UN1555	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Arsenic chloride liquid. *See* Arsenic trichloride										
	Arsenic disulfide. *See* Arsenic sulfide, solid										

§172.101 Hazardous Materials Table

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+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Arsenic iodide, solid	Poison B	NA1557	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Arsenic pentoxide, solid	Poison B	UN1559	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Arsenic, solid	Poison B	UN1558	Poison	173.364	173.368	50 pounds	200 pounds	1,2	1,2	
	Arsenic sulfide and a chlorate, mixtures of	Forbidden									
	Arsenic sulfide, solid	Poison B	NA1557	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	Keep dry
	Arsenic trichloride, liquid	Poison B	UN1560	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Arsenic trioxide, solid	Poison B	UN1561	Poison	173.364	173.366 173.368	50 pounds	200 pounds	1,2	1,2	
	Arsenic trisulfide	Poison B	NA1557	Poison	173.364	173.365	50 pounds	200 pounds	1,2	2	
	Arsenic, white, solid. *See* Arsenic trioxide, solid										
	Arsenious acid, solid. *See* Arsenic trioxide, solid										
	Arsenious and mercuric iodide solution	Poison B	NA2810	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Arsine	Poison A	UN2188	Poison gas and Flammable gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
	Asbestos	ORM-C		None	173.1090	173.1090	No limit	No limit	1,2	1,2	Stow and handle to avoid airborne particles.
	Ascaridole (organic peroxide)	Forbidden									
W	Asphalt, *at or above its flashpoint*	ORM-C	NA1999	None	None	None	Forbidden	Forbidden	1	5	When applicable, no fire or residue thereof may be present in the furnace heating the substance while the vehicle is on board a cargo vehicle
	Asphalt, cut back	Flammable liquid	NA1999	Flammable liquid	173.118	173.131	1 quart	10 gallons	1,2	1	
	Asphalt, cut back	Combustible liquid	NA1999	None	173.118a	None	No limit	No limit	1,2	1,2	
	Automobile, motorcycle, tractor, or other self-propelled vehicle. See Motor vehicle										
	Automobile, motorcycle, tractor, or other self-propelled vehicle, engine, or other mechanical apparatus, with charged electric storage battery, wet. See Motor vehicle										
	Azaurolic acid (salt of), (dry)	Forbidden									
	3-Azido-1,2-Propylene glycol dinitrate	Forbidden									
	5-Azido-1-hydroxy tetrazole	Forbidden									
	Azidodithiocarbonic acid	Forbidden									
	Azidoethyl nitrate	Forbidden									
	Azido guanidine picrate (dry)	Forbidden									

Azido hydroxy tetrazole (mercury and silver salts)	Forbidden										
Azinphos methyl	Poison B	NA2783	Poison	173.364	173.365	50 pounds	200 pounds	1,2	4		
Azinphos methyl mixture, liquid	Poison B	NA2783	Poison	173.345	173.346	½pint	1 quart	1,2	5		
1-Aziridinyl phosphine oxide (tris). *See* Tris-(1-aziridinyl) phosphine oxide											
Azotetrazole (dry)	Forbidden										
Bags, burlap, used, must be classed for the hazardous material previously contained in bag. See 173.28, 173.29											
Barium azide, wet, *50% or more water*	Flammable solid	UN1571	Flammable solid	None	173.239	Forbiddenn	1 pound	1,2	1,2	Stow away from heavy metals	
Barium chlorate	Oxidizer	UN1445	Oxidizer	173.153	173.163	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals	
Barium chlorate, wet	Oxidizer	NA1445	Oxidizer	173.153	173.163	25 pounds	200 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals	
Barium cyanide, solid	Poison B	UN1565	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2	Stow away from acids	
Barium nitrate	Oxidizer	UN1446	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2		
A Barium oxide	ORM-B	UN1884	None	173.505	173.800	25 pounds	100 pounds				
Barium perchlorate	Oxidizer	UN1447	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	Stow away from powdered metals	
Barium permanganate	Oxidizer	UN1448	Oxidizer	173.153	172.154	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and hydrogen peroxide	
Barium peroxide	Oxidizer	UN1449	Oxidizer	173.153	173.156	25 pounds	100 pounds	1,2	1,2	Keep dry	
Barium styphnate, monohydrate. See Initating explosive											
Barrel, empty. See Drum, empty											
Battery, dry. Not subject to Parts 170-189 of this subchapter											
Battery, *electric storage,* dry (containing potassium hydroxide, dry *solid, flake, bead, or granular*)	Corrosive material	NA1813	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry	
Battery, *electric storage,* wet, filled with acid	Corrosive material	UN2794	Corrosive	173.260	173.260	Forbidden	No limit	1,2	1,2		
Battery, *electric storage,* wet, *filled with* acid, with automobile (*or specifically named self-propelled vehicle or mechanical apparatus*)	Corrosive material	NA2794	Corrosive	173.250	173.260	No limit	No limit	1,2	1,2	Keep dry	
Battery, *electric storage,* wet, *filled with* alkali, with automobile (*or specifically named self-propelled vehicle or mechanical apparatus*)	Corrosive material	NA2795	Corrosive	173.250	173.260	No limit	No limit	1,2	1,2	Keep dry	
Battery, *electric storage,* wet, with wheelchair	Corrosive material		Corrosive	173.250	173.250 175.10	No limit	No limit	1,2	1,2	Keep dry	
Battery, electric storage, wet, nonspillable. See § 173.260(d)											
Battery, *electric storage,* wet, filled with alkali	Corrosive material	UN2795	Corrosive	173.260	173.260	Forbidden	No limit	1,2	1,2		
Battery fluid, acid	Corrosive material	UN2796	Corrosive	173.244	173.257	1 quart	5 gallons	1,2	1,2		
Battery fluid, acid, with electronic equipment *or* actuating device	Corrosive material	NA2796	Corrosive	None	173.259	Forbidden	5 pints	1,2	1,2		
Battery fluid, acid, with battery, *electric storage, wet, empty, or dry*	Corrosive material	NA2796	Corrosive	None	173.258	Forbidden	5 pints	1,2	1,2		
Battery fluid, alkali	Corrosive material	UN2797	Corrosive	173.244	173.257	1 quart	5 gallons	1,2	1,2		
Battery fluid, alkali, with electronic equipment *or* actuating device	Corrosive material	NA2797	Corrosive	None	173.259	Forbidden	5 pints	1,2	1,2		

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	Battery fluid, alkali, with battery, *electric storage wet, empty or dry*	Corrosive material	UN2797	Corrosive	None	173.258	Forbidden	5 pints	1,2	1,2	
	Battery, lithium. See 173.206(f)										
W	Battery parts *(plates, grids, etc. unwashed, exhausted)*	ORM-C		None	173.505	173.915			1,2	4	
	Benzaldehyde	Combustible liquid	NA1989	None	173.118a	None	No limit	No limit	1,2	1,2	
	Benzene (*benzol*)	Flammable liquid	UN1114	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Benzene diazonium chloride (dry)	Forbidden									
	Benzene diazonium nitrate (dry)	Forbidden									
	Benzene phosphorus dichloride	Corrosive material	UN2798	Corrosive	None	173.250a	Forbidden	5 pints	1	5	
	Benzene phosphorus thiodichloride	Corrosive material	UN2799	Corrosive	None	173.250a	Forbidden	5 pints	1	5	
	Benzenethiol. See Phenyl mercaptan										
	Benzene triazonide	Forbidden									
	Benzidine	Poison B	UN1885	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1	
	Benzine	Flammable liquid	UN1115	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Benzoic acid		NA9094	None	None	173.510	No limit	No limit	1,2	1,2	
	Benzoic derivative pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2770	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Benzoic derivative pesticide, liquid, n.o.s. (*compounds and preparations*),	Poison B	UN2769	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Benzoic derivative pesticide, solid, n.o.s. (*compounds and preparations*), solid	Poison B	UN2769	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Benzonitrile	Combustible liquid	UN2224	None	173.118a	None	No limit	No limit	1,2	1,2	
	Benzoxidiazoles (dry)	Forbidden									
	Benzoyl azide	Forbidden									
	Benzoyl chloride	Corrosive material	UN1736	Corrosive	173.244	173.247	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Benzoyl peroxide	Organic peroxide	NA2085	Organic peroxide	None	173.157 173.158	Forbidden	25 pounds	1,2	1	
	Benzoyl peroxide, *more than 77% but less than 95% with water. See* Benzoyl peroxide.		UN2088								
	Benzoyl peroxide, *not less than 30% but not more than 52% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2089								

	Benzoyl peroxide, *not more than 72% as a paste. See* Organic peroxide, solid, n.o.s.		UN2087								
	Benzoyl peroxide, *not more than 77% with water. See* Benzoyl peroxide.		UN2090								
	Benzoyl peroxide, *technically pure or* Benzoyl peroxide, *more than 52% with inert solid. See* Benzoyl peroxide.		UN2085								
	Benzyl bromide (*bromotoluene, alpha*)	Corrosive material	UN1737	Corrosive	None	173.281	Forbidden	5 pints	1	5	Keep dry
	Benzyl chloride	Corrosive material	UN1738	Corrosive	173.244	173.295	Forbidden	1 quart	1	4	Keep dry
	Benzyl chloroformate (*benzyl chlorocarbonate*)	Corrosive material	UN1739	Corrosive	None	173.288	Forbidden	5 pints	1	5	Keep dry
	Beryllium chloride	Poison B	NA1566	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Beryllium compound, n.o.s.	Poison B	UN1566	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Beryllium fluoride	Poison B	NA1566	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Beryllium nitrate	Oxidizer	UN2464	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Biphenyl triozonide	Forbidden									
	Bipyridilium pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2782	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Bipyridilium pesticide, liquid, n.o.s. (*compounds and preparations*),	Poison B	UN2781	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Bipyridilium pesticide, solid, n.o.s. (*compounds and preparations*),	Poison B	UN2761	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Black powder	Class A explosive		Explosive A	None	173.60	Forbidden	Forbidden	6	5	
	Black powder igniter with empty cartridge bag	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Blasting agent, n.o.s.	Blasting agent		Blasting agent	None	173.114a	Forbidden	100 pounds	1,2	1,2	
	Blasting caps. See Detonators, Class A *or* Class C explosives										
	Blasting caps, electric. See Detonators, Class A *or* Class C explosives										
	Blasting caps, percussion activated. See Detonators, Class A *or* Class C explosives										
	Blasting caps with detonating cord. See Detonators, Class A or Class C explosives and Detonating primers, Class A or Class C explosives.										
	Blasting caps with metal clad mild detonating fuze. See Detonators, Class A *or* Class C explosives										
	Blasting caps with safety fuse. See Detonators, Class A *or* Class C explosives										
	Blasting caps with shock tubes. See Detonators, Class A *or* Class C explosives										
	Blasting gelatin. See High explosive										
	Blasting powder. See Black powder										
W	Bleaching powder, *containing 39% or less available chlorine*	ORM-C	UN2208	None	173.505	173.920			1,2	1,2	Keep dry. Stow separate from flammable liquids and acids. (Stow away from oils, grease, and similar organic materials.
	Bomb, explosive. See Explosive bomb										
	Bomb, explosive with gas, smoke, or incendiary material. See Explosive bomb										
	Bomb, fireworks. See Fireworks, special										

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	Bomb, gas, smoke, or incendiary, nonexplosive. See Chemical ammunition, nonexplosive										
	Bomb, incendiary, or smoke without bursting charge. See Fireworks, special										
	Bomb, practice, with electric primer or electric squib (non-explosive). See 173.55										
	Bomb, sand-loaded or empty (non-explosive). See 173.55										
	Booster, explosive	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	
	Bordeaux arsenite, liquid	Poison B	NA2759	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Bordeaux arsenite, solid	Poison B	NA2759	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Boron tribromide	Corrosive material	UN2692	Corrosive	None	173.251	Forbidden	1 quart	1	5	
	Boron trichloride	Corrosive material	UN1741	Corrosive	None	173.251	Fobiddcn	1 quart	1,2	5	Stow in well ventilated space. Shade from radiant heat. Segregation same as for nonflammable gases.
+	Boron trifluoride	Nonflammable gas	UN1008	Nonflammable gas and Poison	None	173.302	Forbidden	Forbidden	1	5	Stow away from living quarters and foodstuffs
	Boron trifluoride-acetic acid complex	Corrosive material	UN1742	Corrosive	173.244	173.247	1 quart	1 gallon	1,2	1,2	
	Bromine	Corrosive material	UN1744	Corrosive	None	173.252	Forbidden	1 quart	1	5	Keep cool
	Bromine azide	Forbidden									
	Bromine pentafluoride	Oxidizer	UN1745	Oxidizer	None	173.246	Forbidden	100 pounds	1	5	Shade from radiant heat. Segregation same as for corrosives
	Bromine trifluoride	Oxidizer	UN1746	Oxidizer and Poison	None	173.246	Forbidden	100 pounds	1	5	Shade from radiant heat. Segregation same as for corrosives
	4-Bromo-1,2-dinitrobenzene (unstable at 59 deg C.)	Forbidden									
	Bromoacetic acid, solid	Corrosive material	UN1938	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Bromoacetic acid solution	Corrosive material	UN1938	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	Glass carboys in hampers not permited under deck
	Bromoacetone, liquid	Poison A	UN1569	Poison gas	None	173.329	Forbidden	Forbidden	1	5	Segregation same as for flammable liquids
	Bromobenzene	Combustible liquid	UN2514	None	173.118a	None	No limit	No limit	1,2	1,2	
A	Bromochloromethane	ORM-A	UN1887	None	173.505	173.605	10 gallons	55 gallons			
	Bromosilane	Forbidden									

Bromotoluene, alpha. See Benzyl bromide										
Bromotrifluoromethane (*R–13B1 or H–1301*)	Nonflammable gas	UN1009	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1,2	
Brucine, solid (*dimethoxy strychnine*)	Poison B	UN1570	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
Burnt cotton, not repicked	Flammable solid	NA1325	Flammable solid	None	173.159	Forbidden	Forbidden	1	5	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
Burster, explosive	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	
+ Butadiene, inhibited	Flammable gas	UN1010	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	Stow away from living quarters
Butane *or* Liquefied petroleum gas. *See* Liquefied petroleum gas										
1,2,4-Butanetriol trinitrate	Forbidden									
tert-Butoxycarbonyl azide	Forbidden									
n-Butyl-4,4-di-(tert-butylperoxy)valerate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2140								
n-Butyl-4,4-di-(tert-butylperoxy)valerate, *not more than 52% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2141								
Butyl acetate	Flammable liquid	UN1123	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
n-Butyl acid phosphate. *See* Acid butyl phosphate										
Butyl alcohol	Flammable liquid	NA1120	Flammable liquid	173.118	173.125	1 quart	10 gallons	1,2	1	
Butylamine	Flammable liquid	UN1125	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Butyl bromide, *normal*	Flammable liquid	UN1126	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Butyl chloride	Flammable liquid	UN1127	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
tert-Butyl cumyl peroxide, *technically pure or* tert-Butyl cumene peroxide, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2091								
Butyl ether	Flammable liquid	UN1149	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
Butyl formate	Flammable liquid	UN1128	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
tert-Butyl hydroperoxide, *more than 72% but not more than 90% with water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2094								
tert-Butyl hydroperoxide, *not more than 72% with water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2093								
tert-Butyl hydroperoxide, *not more than 80% in di-tert-butyl peroxide and solvent. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2092								
tert-Butyl hydroperoxide, *not more than 80% in di-tert-butyl peroxide or solvent. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2092								

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	tert-Butyl hydroperoxide, more than 90% with water	Forbidden									
	n-Butyl isocyanate	Flammable liquid	UN2485	Flammable liquid and Poison	None	173.119 173.3a	1 quart	10 gallons	1,2	1	
	tert-Butyl isopropyl benzene hydroperoxide	Organic peroxide	NA2091	Organic peroxide	173.153	173.224	1 quart	1 quart	1,2	4	
	Butyl mercaptan	Flammable liquid	UN2347	Flammable liquid	None	173.141	Forbidden	10 gallons	1,3	5	
	tert-Butyl peroxy-2-ethylhexanoate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2143								
	tert-Butyl peroxy-2-ethylhexanoate, *not more than 30%* with 2,2-Di-(tert-butylperoxy)butane, *not more than 35%, with not less than 35% phlegmatizer. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2886								
	tert-Butyl peroxy-2-ethylhexanoate, *not more than 12%* with 2,2-Di-(tert-butylperoxy)butane, *not more than 14% with not less than 14% phlegmatizer and 60% inert inorganic solid. See* Organic peroxide, solid, n.o.s.		UN2887								
	tert-Butyl peroxy-2-ethylhexanoate, *not more than 50% with phlegmatizer. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2888								
	tert-Butyl peroxy-3,5,5-trimethylhexanoate *or* tert-Butyl peroxyisononanoate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2104								
	3-tert-Butyl peroxy-3-phenylphthalide, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2596								
	tert-Butyl peroxyacetate, *not more than 76% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2095								
	tert-Butyl peroxyacetate, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2096								

tert-Butyl peroxpacetate, more than 76% in solution	Forbidden									
tert-Butyl peroxybenzoate, *not more than 75% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2098								
tert-Butyl peroxybenzoate, *not more than 50% with inert inorganic solid. See* Organic peroxide, solid, n.o.s.		UN2890								
tert-Butyl peroxybenzoate, *technically pure or* tert-Butyl peroxybenzoate, *more than 75% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2097								
tert-Butyl peroxycrotonate, *not more than 76% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2183								
n-Butyl peroxydicarbonate, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2169								
n-Butyl peroxydicarbonate, *not more than 27% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2170								
n-Butyl peroxydicarbonate, more than 52% in solution	Forbidden									
tert-Butyl peroxydiethylacetate, *33%* with tert-Butyl peroxybenzoate, *33%, and solvent. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2551								
tert-Butyl peroxydiethylacetate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2144								
tert-Butyl peroxyisobutyrate, *more than 52% but not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2142								
tert-Butyl peroxyisobutyrate, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2562								
tert-Butyl peroxyisobutyrate, more than 77% in solution	Forbidden									
tert-Butyl peroxyisopropyl carbonate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2108								
tert-Butyl peroxymaleate, *not more than 55% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2100								
tert-Butyl peroxymaleate, *not more than 55% as a paste. See* Organic peroxide, solid, n.o.s.		UN2101								
tert-Butyl peroxymaleate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2099								
tert-Butyl peroxyneodecanoate, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2177								
tert-Butyl peroxyneodecanoate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2594								

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(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	tert-Butyl peroxyphthalate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2105								
	tert-Butyl peroxypivalate, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2110								
	Butyl phosphoric acid. *See* Acid butyl phosphate										
	n-Butyl phthalate		NA2095	None	None	173.510	No limit	No limit	1,2	1,2	
	Butyl trichlorosilane	Corrosive material	UN1747	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Butyraldehyde	Flammable liquid	UN1129	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Butyric acid	Corrosive material	UN2820	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Cabazide	Forbidden									
	Cadmium acetate		NA2570	None	None	173.510	No limit	No limit	1,2	1,2	
	Cadmium bromide		NA2570	None	None	173.510	No limit	No limit	1,2	1,2	
	Cadmium chloride		NA2570	None	None	173.510	No limit	No limit	1,2	1,2	If stowed under deck, must be stowed in a recoverable location
	Calcium arsenate, solid	Poison B	UN1578	Poison	173.364	173.367 173.368	50 pounds	200 pounds	1,2	1,2	
	Calcium arsenite, solid	Poison B	NA1574	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Calcium bisulfite solution. *See* Calcium hydrogen sulfite solution										
	Calcium carbide	Flammable solid	UN1402	Flammable solid and Dangerous when wet	None	173.178	Forbidden	25 pounds	1,2	1,2	Keep dry. Stow away from copper, its alloys, and salts
	Calcium chlorate	Oxidizer	UN1452	Oxidizer	173.158	173.163	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds. Stow away from powdered metals and cyanide
	Calcium chlorite	Oxidizer	UN1453	Oxidizer	None	173.160	Forbidden	100 pounds	1,2	1,2	Separate from ammonium compounds, powdered materials, and cyanides
	Calcium chromate		NA9096	None	None	173.510	No limit	No limit	1,2	1,2	
AW	Calcium cyanamide, not hydrated (*containing more than 0.1% calcium carbide*)	ORM-C	UN1403	None	None	173.945	25 pounds	200 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
	Calcium cyanide, solid *or* Calcium cyanide mixture, solid	Poison B	UN1575	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2	Stow away from corrosive liquids. Keep dry
	Calcium dodecylbenzenesulfonate		NA2097	None	None	173.510	No limit	No limit	1,2	1,2	
	Calcium hydrogen sulfite solution	Corrosive material	NA2693	Corrosive	173.244	173.245	1 quart	5 gallons	1,2	1,2	

	Calcium hypochlorite, hydrated (*minimum 5.5% but not more than 10% water, and containing more than 39% available chlorine*)	Oxidizer	UN2880	Oxidizer	173.153	173.217	50 pounds	100 pounds	1,2	1,2	
	Calcium hypochlorite mixture, *dry. (Containing more than 39% available chlorine)*	Oxidizer	UN1748	Oxidizer	173.153	173.217	50 pounds	100 pounds	1,2	1,2	Keep cool and dry
	Calcium, metal	Flammable solid	UN1401	Flammable solid and Dangerous when wet	173.153	173.154	25 pounds	100 pounds	1,2	4	Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet
	Calcium, metal, crystalline	Flammable solid	NA1401	Flammable solid and Dangerous when wet	None	173.231	Forbidden	25 pounds	1,2	5	Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet
	Calcium nitrate (*See 173.182(a) Note*)	Oxidizer	UN1454	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
AW	Calcium oxide	ORM-B	UN1910	None	173.505	173.850	25 pounds	100 pounds	1,2	1,2	Keep dry. Stow away from explosives, acids, combustible materials, and ammonium salts
	Calcium permanganate	Oxidizer	UN1456	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	Separate from ammonium compounds and hydrogen peroxide
	Calcium peroxide	Oxidizer	UN1457	Oxidizer	173.153	173.156	25 pounds	100 pounds	1,2	1,2	Keep dry
	Calcium phosphide	Flammable solid	UN1360	Flammable solid and Dangerous when wet	None	173.161	Forbidden	25 pounds	1	5	Keep cool and dry. Segregation same as for flammable solids labeled Dangerous When Wet
	Calcium resinate	Flammable solid	UN1313	Flammable solid	None	173.166	Forbidden	125 pounds	1	5	
	Calcium resinate, fused	Flammable solid	UN1314	Flammable solid	None	173.166	Forbidden	125 pounds	1	5	
	Calcium silicon (*powder*)	Flammable solid	UN1406	Flammable solid and Dangerous when wet	173.153	173.178	Forbidden	25 pounds	1,2	4	Segregation same as for flammable solids labeled Dangerous When Wet
AW	Camphene	ORM-A	NA9011	None	173.505	173.610	No limit	No limit	1,3	1,3	Stow away from foodstuffs and living quarters
	Camphor oil	Combustible liquid	UN1130	None	173.118a	None	No limit	No limit	1,2	1,2	
	Cannon primer	Class C explosive		None	None	173.107	50 pounds	150 pounds	1,3	5	
	Caprylyl peroxide solution	Organic peroxide	NA2129	Organic peroxide	173.153	173.221	1 quart	1 quart	1,2	4	Keep cool. Stow separate from combustible materials, explosives, or acids
	Caps, blasting. See Detonators, Class A *or* Class C explosives										
	Caps, toy. See Toy caps										
	Captan		NA9099	None	None	173.510	100 pounds	No limit	1,2	1,2	
	Carbamate pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2758	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Carbamate pesticide, liquid, n.o.s. (*compounds and preparations*),	Poison B	UN2757	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Carbamate pesticide, solid, n.o.s. (*compounds and preparations*),	Poison B	UN2757	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
A	Carbaryl	ORM-A	NA2757	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Carbofuran	Poison B	NA2757	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Carbofuran mixture, liquid (RQ-10/4.54)	Poison B	NA2757	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
+	Carbolic acid. *See* Phenol										
	Carbolic acid, liquid (*liquid tar acid containing over 50% phenol*). *See* Phenol, liquid										

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+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Carbon bisulfide, *or* Carbon disulfide	Flammable liquid	UN1131	Flammable liquid	None	173.121	Forbidden	Forbidden	1	5	Keep cool. Not permitted on any vessel transporting explosives, except that quantities not exceeding 200 pounds may be transported on such vessels under conditions approved by the Captain of the Port
	Carbon dioxide	Nonflammable gas	UN1013	Nonflammable gas	173.306	173.302 173.304	150 pounds	300 pounds	1,2	1,2	
	Carbon dioxide-nitrous oxide mixture	Nonflammable gas	UN1015	Nonflammable gas	173.306	173..304	150 pounds	300 pounds	1,2	1,2	
	Carbon dioxide-oxygen mixture	Nonflammable gas	UN1014	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2	
	Carbon dioxide, refrigerated liquid	Nonflammable gas	UN2187	Nonflammable gas	173.306	173.314 173.315	150 pounds	300 pounds	1,2	1,2	
AW	Carbon dioxide, solid, *or* Dry ice, *or* Carbonice	ORM-A	UN1845	None	None	173.615	440 pounds	440 pounds	1	1	Stow away from open ventilators. Stow away from cyanides or cyanide mixtures, liquid or dry
+	Carbon monoxide	Flammable gas	UN1016	Flammable gas	173.306	173.302	Forbidden	150 pounds	1	4	
	Carbon monoxide, cryogenic liquid	Flammable gas	NA9202	Flammable gas	None	173.318	Forbidden	Forbidden	1	5	Stow away from living quarters
AW	Carbon tetrachloride	ORM-A	UN1846	None	173.505	173.620	1 quart	55 gallons	1,2	1,2	Stow away from living quarters
	Carbonyl chloride. See Phosgene										
	Carboys, empty, must be classed for the hazardous material previously contained in carboy. See 173.29										
	Cartridge bags, empty, with black powder igniter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Cartridge, practice ammunition	Class C explosive		Explosive C	None	173.101a	50 pounds	150 pounds	1,2	1,2	
	Case oil. See Gasoline *or* Naptha										
	Casinghead gasoline. See Gasoline										
W	Castor Beans	ORM-C		None	173.505	173.952			1,2	1,2	Stow away from living quarters and foodstuffs. Bulk shipments permitted in tight vans or containers only on cargo vessels (Castor beans only)
W	Castor pomace. *See* Castor beans										
	Caustic, potash, dry, solid, flake, bead, *or* granular. *See* Potassium hydroxide, dry, *etc.*										
	Caustic potash, liquid *or* solution. *See* Potassium hydroxide solution										

Caustic soda, dry, solid, flake, bead, *or* granular. *See* Sodium hydroxide, dry, *etc.*										
Caustic soda, liquid *or* solution. *See* Sodium hydroxide solution										
W *Cellosolve. See* Ethylene glycol monoethyl ether										
W *Cellosolve acetate. See* Ethylene glycol monoethyl ether acetate										
Cement	Combustible Liquid	NA1133	None	173.118a	None	No limit	No limit	1,2	1,2	
Cement	Flammable liquid	NA1133	Flammable liquid	173.118	173.132	1 quart	10 gallons	1,2	1	
Cement, adhesive, n.o.s. *See* Cement										
Cement, container, linoleum, tile, *or* wallboard, liquid	Flammable liquid	NA1133	Flammable liquid	173.118	173.132	1 quart	15 gallons	1,2	1	
Cement, leather	Flammable liquid	NA1133	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Cement, pyroxylin	Flammable liquid	NA1133	Flammable liquid	173.118	173.132	1 quart	15 gallons	1,2	1	
Cement, roofing, liquid	Flammable liquid	NA1133	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Cement, rubber	Flammable liquid	NA1133	Flammable liquid	173.118	173.132	1 quart	15 gallons	1,2	1	
Cesium metal	Flammable solid	UN1407	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
Charcoal briquettes *or* briquets	Flammable solid	NA1361	Flammable solid	173.162	173.162	50 pounds	50 pounds	1,2	1,2	
Charcoal screenings, made from 'pinon' wood	Flammable solid	NA1361	Flammable solid	173.162	173.162	25 pounds	200 pounds	1,2	1,	
Charcoal, shell	Flammable solid	NA1361	Flammable solid	173.162	173.162	25 pounds	200 pounds	1,2	1,2	
Charcoal, wood, ground, crushed, granulated, *or* pulverized	Flammable solid	NA1361	Flammable solid	173.162	173.162	25 pounds	200 pounds	1,2	1,2	
Charcoal, wood, lump	Flammable solid	NA1361	Flammable solid	173.162	173.162	50 pounds	50 pounds	1,2	1,2	
Charcoal wood screenings, other than 'pinon' wood screenings	Flammable solid	NA1361	Flammable solid	None	173.162	Forbidden	Forbidden	1	1	
Charged well casing jet perforating gun (*total explosive contents in guns 20 pounds or more per motor vehicle*)	Class A explosive		Explosive A	None	173.53 173.80	Forbidden	Forbidden			Forbidden
Charged well casing jet perforating gun (*total explosive contents in guns not exceeding 20 pounds per motor vehicle or special offshore down hole tool pallet*	Class C explosive		Explosive C	None	173.53 173.110	Forbidden	Forbidden	1,2	5	
Chemical ammunition, explosive. See Ammunition, chemical, explosive, with ...										
Chemical ammunition, nonexplosive (*containing a Poison B material*)	Poison B	UN2016	Poison	173.345	173.350	Forbidden	55 gallons			See correct shipping name of applicable Poison B material for stowage, special handling, and special segregation requirements
Chemical ammunition, nonexplosive (*containing an irritating material*)	Irritating material	UN2017	Irritant	None	173.383	Forbidden	20 pounds			See correct shipping name of applicable Irritant material for stowage, special handling, and special segregation requirements
Chemical ammunition, nonexplosive (*containing a Poison A material*)	Poison A	UN2016	Poison gas	None	173.330	Forbidden	Forbidden			See correct shipping name of applicable Poison A material for stowage, special handling, and special segregation requirements

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	Chemical kit	Corrosive material	NA1760	Corrosive	173.286		1 quart	1 quart	1,3	1,3	
	Chlorate and borate mixture (*containing more than 28% chlorate*)	Oxidizer	UN1458	Oxidizer	173.153	173.229	25 pounds	100 pounds	1,2	4	Stow away from ammonium compounds and away from powdered metals
	Chlorate and magnesium chloride mixture (*containing more than 28% chlorate*)	Oxidizer	UN1459	Oxidizer	173.153	173.229	25 pounds	100 pounds	1,2	4	Stow away from ammonium compounds, and away from powdered metals
	Chlorate explosive, dry. See High explosive										
	Chlorate, n.o.s.	Oxidizer	UN1461	Oxidizer	173.153	173.163	25 pounds	100 pounds	1,2	4	Stow away from ammonium compounds and away from powdered metals
	Chlorate, n.o.s., wet	Oxidizer	NA1461	Oxidizer	173.153	173.163	25 pounds	200 pounds	1,2	4	Stow away from ammonium compounds and away from powdered metals
	Chlorate of potash. *See* Potassium chlorate										
	Chlorate of soda. *See* Sodium chlorate										
	Chlorate powder. *See* High explosive										
	Chlordane, liquid	Flammable liquid	NA2762	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Chlordane, liquid	Combustible liquid	NA2762	None	173.118a	None	No limit	No limit	1,2	1,2	
	Chloric acid	Oxidizer	NA2626	Oxidizer and Poison	None	173.237	Forbidden	Forbidden			Forbidden
	Chloride of phosphorus. *See* Phosphorus trichloride										
	Chloride of sulfur. *See* Sulfur chloride										
W	Chlorinated lime (*chloride of lime.*) *See* Bleaching powder										
+	Chlorine	Nonflammable gas	UN1017	Nonflammable gas and Poison	None	173.304 173.314 173.315	Forbidden	Forbidden	1,2	5	Stow in a well-ventilated space. Stow away from organic materials
	Chlorine azide	Forbidden									
	Chlorine dioxide hydrate, frozen	Oxidizer	NA9191	Oxidizer and Poison	None	173.237	Forbidden	Forbidden			Forbidden
	Chlorine dioxide (not hydrate)	Forbidden									
	Chlorine trifluoride	Oxidizer	UN1749	Oxidizer and Poison	None	173.246	Forbidden	100 pounds	1,3	5	Stow in well ventilated area away from organic material
	Chloroacetic acid, liquid *or* solution	Corrosive material	UN1750	Corrosive	173.244	173.294	1 quart	1 quart	1,2	1,2	Glass carboys in hampers not permitted under deck
	Chloroacetic acid, solid	Corrosive material	UN1751	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Chloroacetophenone, gas, liquid, *or* solid (*CN*)	Irritating material	UN1697	Irritant	None	173.382	Forbidden	75 pounds	1	5	

	Chloroacetyl chloride	Corrosive material	UN1752	Corrosive	None	173.253	Forbidden	1 quart	1	5	Keep dry
	Chlorobenzene	Flammable liquid	UN1134	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	Chlorobenzol. *See* Chlorobenzene										
	p-Chlorobenzoyl peroxide	Organic peroxide	UN2113	Organic peroxide	None	173.157 173.158	Forbidden	25 pounds	1	1	
	p-Chlorobenzoyl peroxide, *not more than 75% with water. See* p-Chlorobenzoyl peroxide.		UN2113								
	p-Chlorobenzoyl peroxide, *not more than 52% as a paste. See* Organic peroxide, solid, n.o.s.		UN2114								
	p-Chlorobenzoyl peroxide, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2115								
	Chlorodinitrobenzene. See Dinitrochlorobenzene										
	1-Chloro-1,1-difluoroethane. *See* Chlorodifluoroethane (*R-142b*)										
+	Chlorodifluoroethane (*R-142b*) *or* (1-Chloro-1,1-difluoroethane).	Flammable gas	UN2517	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	
	Chlorodifluoromethane (*R-22*)	Nonflammable gas	UN1018	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1	
	Chlorodifluoro-methane and chlorpentafluoroethane mixture (*constant boiling mixture*) (*R-502*). *See* Refrigerant gas, n.o.s.										
AW	Chloroform	ORM-A	UN1888	None	173.505	173.630	10 gallons	55 gallons	1,2	1,2	Stow away from living quarters and foodstuffs
+	4-Chloro-o-toluidine hydrochloride	Poison B	UN1579	Poison	None	173.362	Forbidden	1 quart	1,2	1,2	
	Chloropentafluoroethane (*R-115*)	Nonflammable gas	UN1020	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1,2	
	3-Chloroperoxybenzoic acid, *not more than 86% with 3-chlorobenzoic acid See* Organic peroxide, solid, n.o.s.		UN2755								
	Chlorophenyltrichlorosilane	Corrosive material	UN1753	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
+	Chloropicrin, absorbed	Poison B	NA1583	Poison	None	173.357	Forbidden	Forbidden	1	5	Keep cool
+	Chloropicrin and methyl chloride mixture	Poison A	UN1582	Poison gas andFlammable gas	None	173.329	Forbidden	Forbidden	1	5	Keep cool. Segregation same as for flammable gases
+	Choloropicrin and nonflammable, nonliquefied compressed gas mixture	Poison A	NA1955	Poison gas nonflammable gas	None	173.329	Forbidden	Forbidden	1	5	Keep cool
	Chloropicrin mixture, flammable (*pressure not exceeding 14.7 psia; flash point below 100° F*)	Poison B	NA2929	Poison and flammable liquid	None	173.357	Forbidden	Forbidden	1	5	Keep cool
+	Chloropicrin, liquid	Poison B	UN1580	Poison	None	173.357	Forbidden	Forbidden	1	5	Keep cool
+	Chloropicrin mixture (*containing no compressed gas or Poison A liquid*)	Poison B	UN1583	Poison	None	173.357	Forbidden	Forbidden	1	5	Keep cool
A	Chloroplatinic acid, solid	ORM-B	UN2507	None	173.505	173.600	25 pounds	100 pounds			
	Chloroprene, inhibited	Flammable liquid	UN1991	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Chloroprene, uninhibited	Forbidden									

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+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	2-Chloropropene	Flammable liquid	UN2456	Flammable liquid	None	173.119	Forbidden	10 gallons	1,2	5	
	Chlorosulfonic acid	Corrosive material	UN1754	Corrosive	173.244	173.254	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Chlorosulfonic acid-sulfur trioxide mixture	Corrosive material	UN1754	Corrosive	173.144	173.254	1 quart	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Chlorotetrafluoroethane (*R-124*)	Nonflammable gas	UN1021	Nonflammable gas	173.306	173.304 173.314	150 pounds	300 pounds	1,2	1,2	
	Chlorotrifluoromethane (*R-13*)	Nonflammable gas	UN1022	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1,2	
A	Chlorpyrifos	ORM-A	NA2783	None	173.505	173.510	100 pounds	No limit	1,2	1,2	
	Chromic acetate		NA9101	None	None	173.510	No limit	No limit	1,2	1,2	
	Chromic acid mixture, dry	Oxidizer	NA1463	Oxidizer	173.153	173.164	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs
	Chromic acid, solid	Oxidizer	NA1463	Oxidizer	173.153	173.164	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs. Stow separate from flammable liquids and solids
	Chromic acid solution	Corrosive material	UN1755	Corrosive	173.244	173.287	1 quart	1 gallon	1	1	
	Chromic anhydride. *See* Chromic acid, solid										
	Chromic fluoride, solid	Corrosive material	UN1756	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	
	Chromic fluoride solution	Corrosive material	UN1757	Corrosive	173.244	173.245	1 quart	1 gallon	1,2	1,2	
	Chromic sulfate		NA9100	None	None	173.510	No limit	No limit	1,2	1,2	
	Chromic trioxide. *See* Chromic acid, solid										
	Chromium oxychloride *or* Chromyl chloride	Corrosive material	UN1758	Corrosive	None	173.247	Forbidden	1 gallon	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Chromous chloride		NA9102	None	None	173.510	No limit	No limit	1,2	1,2	
	Cigarette lighter (*or other similar ignition device*)	Flammable gas	UN1057	Flammable gas	173.21 175.10	173.308	21 ounces	25 pounds	1	1	
	Cigarette lighter (*or other similar ignition device*)	Flammable liquid	UN1226	Flammable liquid	173.21 175.10	173.118	Forbidden	Forbidden	1	1	
	Cigarette load	Class C explosive		Explosive C	None	173.111	50 pounds	150 pounds	1,2	1,2	
	Cloud gas cylinder. See Chemical ammunition, nonexplosive										
	Coal briquettes, hot	Forbidden									
	Coal facings. *See* Coal ground bituminous, *etc.*										

	Coal gas. See Hydrocarbon gas, nonliquefied										
	Coal, ground bituminous, sea coal *or* coal facings	Flammable solid	NA1361	Flammable solid	173.165	173.165	Forbidden	Forbidden	1	1	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Coal oil (*export shipment only*). *See* Kerosene										
	Coal tar distillate	Combustible liquid	UN1137	None	173.118a	None	No limit	No limit	1,2	1,2	
	Coal tar distillate	Flammable liquid	UN1136	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Coal tar dye, liquid (*not otherwise specifically named in 172.101*)	Corrosive material	NA2801	Corrosive	173.244	173.249a	1 quart	10 gallons	1,2	1,2	
	Coating solution	Flammable liquid	UN1139	Flammable liquid	173.118	173.132	1 quart	15 gallons	1,2	1	
	Cobaltous bromide		NA9103	None	None	173.510	No limit	No limit	1,2	1,2	
	Cobaltous formate		NA9104	None	None	173.510	No limit	No limit	1,2	1,2	
	Cobaltous sulfamate		NA9105	None	None	173.510	No limit	No limit	1,2	1,2	
	Cobalt resinate, precipitated	Flammable solid	UN1318	Flammable solid	None	173.166	Forbidden	125 pounds	1,2	1,2	
	Cocculus, solid (*fishberry*)	Poison B	UN1584	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
W	Coconut meal pellets *containing at least 6% and not more than 13% moisture and not more than 10% residual fat content*	ORM-C		None	173.505	173.955			1,2	4	Keep dry
	Coke, hot	Forbidden									
	Collodion	Flammable liquid	NA2059	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Combination fuze	Class C explosive		Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3	
	Combination primer	Class C explosive		None	None	173.107	50 pounds	150 pounds	1,3	5	
	Combustible liquid, n.o.s.	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Commercial shaped charge. See High explosive										
	Common fireworks. *See* Fireworks, common										
	Compound, cleaning, liquid	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Compound, cleaning, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
	Compound, cleaning, liquid	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Compound, cleaning, liquid (*containing phosphoric acid, acetic acid, sodium hydroxide or potassium hydroxide*)	Corrosive material	NA1760	Corrosive	173.244	173.249a	1 quart	1 quart	1,2	1,2	
	Compound, cleaning, liquid (containing hydrochloric (muriatic) acid)	Corrosive material	NA1789	Corrosive	173.244	173.263	1 quart	1 gallon	1	1	
	Compound, cleaning, liquid (containing hydrofluoric acid)	Corrosive material	NA1790	Corrosive	173.244	173.256	1 quart	1 gallon	1	4	
	Compound, polishing, liquid	Flammable liquid	NA1142	Flammable liquid	173.118	173.119	1 quart	55 gallons	1,2	1	
	Compound, rust preventing *or* Compound, rust removing	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 gallon	1,2	1,2	
	Compound, tree *or* weed killing, liquid	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Compound, tree *or* weed killing, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	

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(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
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	Compound, tree *or* weed killing, liquid	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Compound, tree *or* weed killing, liquid	Poison B	NA2810	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Compound, tree *or* weed killing, solid	Oxidizer	NA1479	Oxidizer	173.153	173.154 173.229	25 pounds	100 pounds			
	Compound, vulcanizing, liquid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
	Compound, vulcanizing, liquid	Flammable liquid	NA1142	Flammable liquid	173.118	172.119	1 quart	10 gallons	1,2	1	
	Compressed gas, n.o.s.	Flammable gas	UN1954	Flammable gas	173.306	173.302 173.304 173.305	Forbidden	300 pounds	1	4	
	Compressed gas, n.o.s.	Nonflammable gas	UN1956	Nonflammable gas	173.306 173.307	173.302 173.304 173.305	150 pounds	300 pounds	1,2	1,2	
	Consumer commodity	ORM-D		None	173.505(b)	173.510 173.1200	65 pounds gross	65 pounds gross			Not subject to requirements of Part 176
	Container, reused or empty, must be classed for the hazardous material previously contained. See 173.28, 173.29										
	Copper acetoarsenite, solid	Poison B	UN1585	Poison	173.364	173.367	50 pounds	200 pounds	1,2	1,2	
	Copper acetylide	Forbidden									
	Copper amine azide	Forbidden									
	Copper arsenite, solid	Poison B	UN1586	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Copper based pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2776	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Copper based pesticide, liquid, n.o.s. (*compounds and preparations*),	Poison B	UN2775	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Copper based pesticide, solid, n.o.s. (*compounds and preparations*),	Poison B	UN2775	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
A	Copper chloride	ORM-B	UN2802	None	173.505	173.800	25 pounds	100 pounds	1,2	1,2	
	Copper cyanide	Poison B	UN1587	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2	Stow away from acids
	Copper tetramine nitrate	Forbidden									
W	Copra	ORM-C	UN1363	None	173.505	173.960			1,2	1,2	Segregation same as for flammable solids. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Copra pellets. See Coconut meal pellets										
	Cord, detonating *flexible*	Class A explosive		Explosive A	173.81	173.81	Forbidden	Forbidden	6	5	
	Cord, detonating *flexible*	Class C explosive		Explosive C	None	173.104	Forbidden	150 pounds	1,3	1,3	

	Corrosive liquid, n.o.s.	Corrosive material	UN1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4	For material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), 'under deck' stowage is also authorized if the description includes the additional entry specified by 172.203(j)(2)
	Corrosive liquid, poisonous, n.o.s.	Corrosive material	UN2922	Corrosive and Poison	173.244	173.245	1 quart	1 quart	1	4	
	Corrosive solid, n.o.s.	Corrosive material	UN1759	Corrosive	173.244	173.245b	25 pounds	100 pounds	1	4	For material that meets only the corrosion to skin criteria of 49 CFR 173.240(a)(1), 'under deck' stowage is also authorized if the description includes the additional entry specified by 172.203(j)(2)
	Cosmetics, liquid, n.o.s.	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
	Cosmetics, n.o.s.	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Cosmetics, n.o.s.	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Cosmetics, n.o.s.	Flammable solid	NA1325	Flammable solid	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
	Cosmetics, n.o.s.	Oxidizer	NA1479	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
	Cosmetics, solid, n.o.s.	Corrosive material	NA1759	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
W	Cotton	ORM-C		None	173.505	173.965			1,2	1,2	Segregation same as for flammable solids. See 176.900 to 176.904
	Coumaphos	Poison B	NA2783	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Coumaphos mixture, liquid	Poison B	NA2783	Poison	173.345	173.346	½pint	1quart	1,2	1,2	
	Cresol	Corrosive material	UN2076	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Crotonaldehyde	Flammable liquid	UN1143	Flammable liquid and Poison	None	173.119 173.8a	1 quart	1 gallon	1,2	1	
	Crotonic acid	Corrosive material	UN2823	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Crotonylene	Flammable liquid	UN1144	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Crude oil, petroleum	Combustible liquid	UN1267	None	173.118a	None	No limit	No limit	1,2	1,2	
	Crude oil, petroleum	Flammable liquid	UN1267	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Cumene hydroperoxide	Organic peroxide	UN2116	Organic peroxide	173.153	173.224	1 quart	1 quart	1,2	4	
	Cumene hydroperoxide, *technically pure. See* Cumene hydroperoxide.		UN2116								
	Cupric acetate		NA9106	None	None	173.510	No limit	No limit	1,2	1,2	
	Cupric cyanide. See Copper cyanide										
	Cupric nitrate	Oxidizer	NA1479	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Cupric oxalate		NA2449	None	None	173.510	No limit	No limit	1,2	1,2	
	Cupric sulfate		NA9109	None	None	173.510	No limit	No limit	1,2	1,2	
	Cupric sulfate, ammoniated		NA9110	None	None	173.510	No limit	No limit	1,2	1,2	
	Cupric tartrate		NA9111	None	None	173.510	No limit	No limit	1,2	1,2	
	Cuprietlylene-diamine solution	Corrosive material	UN1761	Corrosive	173.244	173.249	1 quart	1 gallon	1,2	1,2	
	Cyanide *or* cyanide mixture, dry	Poison B	UN1588	Poison	173.364	173.370	25 pounds	200 pounds	1,2	1,2	Keep dry. Stow away from acids
	Cyanide solution, n.o.s.	Poison B	UN1935	Poison	173.345	173.352	1 quart	55 gallons	1,2	1,2	Stow away from acids
	Cyanogen bromide	Poison B	UN1889	Poison	None	173.379	Forbidden	25 pounds	1	5	Shade from radiant heat. Segregation same as for corrosive materials

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	Cyanogen chloride *containing less than 0.9% water*	Poison A	UN1589	Poison gas and Flammable gas	None	173.328	Forbidden	Forbidden	1	5	Shade from radiant heat
	Cyanogen gas	Poison A	UN1026	Poison gas and Flammable gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gas
	Cyanuric triazide	Forbidden									
	Cyclohexane	Flammable liquid	UN1145	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Cyclohexanone peroxide, *50 to 85% peroxide*	Organic peroxide	UN2119	Organic peroxide	173.157	173.158	Forbidden	25 pounds	1	1	
	Cyclohexanone peroxide, *as a paste with not more than 9% by weight active oxygen. See* Cyclohexanone peroxide, *50 to 85% peroxide.*		UN2896								
	Cyclohexanone peroxide, *in solution with not more than 9% by weight active oxygen. See* Cyclohexanone peroxide, *50 to 85% peroxide*		UN2118								
	Cyclohexanone peroxide, *not over 50% peroxide*	Organic peroxide	UN2893	Organic peroxide	173.153	173.154	2 pounds	25 pounds	1,2	1,2	
	Cyclohexanone peroxide and di-(1-hydroxy cyclohexyl) peroxide mixture. *See appropriate cyclohexanone peroxide entry*										
	Cyclohexenyl trichlorosilane	Corrosive material	UN1762	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Cyclohexylamine	Flammable liquid	UN2357	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Cyclohexyl trichlorosilane	Corrosive material	UN1763	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Cyclopentane	Flammable liquid	UN1146	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Cyclopentane, methyl	Flammable liquid	UN2298	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
+	Cyclopropane	Flammable gas	UN1027	Flammable gas	173.306	173.304	Forbidden	300 pounds	1,2	1	
	Cyclotetramethylene tetranitramine (dry) (HMX)	Forbidden									

	Cyclotetramethylene tetranitramine, wet with not less than 10% water. See High explosive.										
	Cyclotrimethylene trinitramine, desensitized. See High explosive										
	Cyclotrimethylene trinitramine, wet with not less than 10% water. See High explosive										
	Cylinder, empty, including ton tanks, must be classed for the hazardous material previously contained in cylinder. See 173.29										
A	2,4-D. *See* 2,4-Dichlorophenoxyacetic acid										
A	DDT *or* Dichlorodiphenyltrichloroethane	ORM-A	NA2761	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Decaborane	Flammable solid	UN1868	Flammable solid and Poison	None	173.236	Forbidden	25 pounds	1,2	1,2	
	Decahydronaphthalene	Combustible liquid	UN1147	None	173.118a	None	No limit	No limit	1,2	1,2	
	Decalin. See Decahydronaphthalene										
	Decanoyl peroxide, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2120								
	Delay connectors. See Detonators, Class A *or* Class C explosives *and* Detonating primers, Class A *or* Class C explosives										
	Delay electric igniter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Denatured alcohol	Flammable liquid	NA1986	Flammable liquid	173.118	173.125	1 quart	10 gallons	1,2	1	
	Depth bomb. See Explosive bomb										
	Detonating fuze, Class A, *with or without radioactive components*	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	
	Detonating fuze, Class C explosive	Class C explosive		Explosive C	None	173.113	50 pounds	150 pounds	1,3	1,3	
	Detonating primers, Class A explosives. *See 173.53*	Class A explosive		Explosive A	None	173.68	Forbidden	Forbidden	6	5	Do not stow detonating primers, Class A explosives with any high explosives. Do not handle at the same time high explosives are being loaded.
	Detonating primers, Class C explosives. *See 173.100*	Class C explosive		Explosive C	None	173.68	173.103(d)	150 pounds	1,2	1,2	The maximum net quantity in one package for this material shipped aboard passenger vessel is limited to 50 pounds. Must not be stowed in portable magazine for metal locker. Do not stow detonating primers, Class C explosives with high explosives. Do not handle at the same time high explosives are being loaded.
	Detonators, Class A explosives. *See 173.53*	Class A explosive		Explosive A	None	173.66	Forbidden	Forbidden	6	–	Do not stow detonators, Class A with any high explosives. Do not handle at the same ttime high explosives are being loaded.
	Detonators, Class C explosives. *See 173.100*	Class C explosive		Explosive C	None	173.66	173.103(d)	150 pounds	1,2	1,2	The maximum net quantity in one package for this material shipped aboard passenger vessel is limited to 50 pounds. Must be stowed in portable magazine or metal locker. Do not stow detonators, Class C explosives with high explosives. Do not handle at the same time high explosives are being loaded.
	Detonators, commercial. See Detonators. Class A *or* Class C explosives										

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(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Di-(1-hydroxycyclohexyl) peroxide, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2148								
	Di-(1-hydroxytetrazole) (dry)	Forbidden									
	Di-(1-naphthoyl)peroxide	Forbidden									
	Di-(2-ethylhexyl) peroxydicarbonate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2122								
	Di-(2-ethylhexyl) peroxydicarbonate, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2123								
	Di-(2-ethylhexyl) phosphoric acid	Corrosive material	NA1902	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Di-(2-methylbenzoyl)peroxide, *not more than 85% with water. See* Organic peroxide, solid, n.o.s.		UN2593								
	1,3-Di-(2-tert-butylperoxyisopropyl) benzene, *technically pure or more than 40% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2112								
	1,3-Di-(2-tert-butylperoxyisopropyl) benzene and 1,4-Di-(2-tert-butylperoxyisopropyl) benzene mixture, *technically pure or more than 40% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2112								
	1,4-Di-(2-tert-butylperoxyisopropyl) benzene, *technically pure or more than 40% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2112								
	Di-(3,5,5-trimethyl-1,2-dioxolanyl-3)peroxide, *not more than 50% as a paste, with phlegmatizer. See* Organic peroxide, solid, n.o.s.		UN2597								
	2,2-Di-(4,4-di-tert-butylperoxycyclohexyl)propane, *not more than 42% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2168								
	2,2-Di-(4,4-di-tert-butylperoxycyclohexyl) propane, more than 42% with inert solid	Forbidden									

	Di-(4-tert-butylcyclohexyl)peroxydicarbonate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2154								
	Di-(4-tert-butylcyclohexyl)peroxydicarbonate, *not more than 42%, stable dispersion, in water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2894								
	Diacetone alcohol	Combustible liquid	UN1148	None	173.118a	None	No limit	No limit	1,2	1,2	
	Diacetone alcohol	Flammable liquid	UN1148	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Diacetone alcohol peroxide, *not more than 57% in solution with not more than 9% hydrogen peroxide, not less than 26% diacetone alcohol and not less than 9% water; total active oxygen content not more than 9%. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2163								
	Diacetone alcohol peroxides, more than 57% in solution with more than 9% hydrogen peroxide, less than 26% diacetone alcohol and less than 9% water; total active oxygen content more than 9% by weight	Forbidden									
	Diacetyl	Flammable liquid	UN2346	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	p-Diazidobenzene	Forbidden									
	1,2-Diazidoethane	Forbidden									
A	Diazinon	ORM-A	NA2783	None	173.505	173.510	No limit	No limit	1,2	1,2	
	1,1'-Diazoaminonaphthalene	Forbidden									
	Diazoaminotetrazole (dry)	Forbidden									
	Diazodinitrophenol. *See* Initiating explosive										
	Diazodinitrophenol (dry)	Forbidden									
	Diazodiphenylmethane	Forbidden									
	Diazonium nitrates (dry)	Forbidden									
	Diazonium perchlorates (dry)	Forbidden									
	1,3-Diazopropane	Forbidden									
	Dibenzyl peroxydicarbonate, *not more than 87% with water. See* Organic peroxide, solid, n.o.s.		UN2149								
	Dibenzyl peroxydicarbonate, more than 87% with water	Forbidden									
	Di-(beta-nitroxyethyl)ammonium nitrate	Forbidden									
+	Diborane *or* diborane mixtures	Flammable gas	UN1911	Flammable gas and Poison	None	173.302	Forbidden	Forbidden	1	5	Separate from Chlorine and materials bearing the oxidizer label.
	Dibromoacetylene	Forbidden									
A	Dibromodifluoromethane	ORM-A	UN1941	None	173.505	173.605	10 gallons	55 gallons			
AW	1,2-Dibromoethane. *See* Ethylene dibromide										
	Dicamba		NA2769	None	None	173.510	No limit	No limit	1,2	1,2	
	Dicetyl peroxydicarbonate, *not more than 42%, stable dispersion, in water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2895								

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Dicetyl peroxydicarbonate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2164								
	Dichlobenil		NA2769	None	None	173.510	No limit	No limit	1,2	1,2	
	Dichlone		NA2761	None	None	173.510	No limit	No limit	1,2	1,2	
	N,N'-Dichlorazodicarbonamidine (salts of), (dry)	Forbidden									
	1,1-Dichloro-2,2-bis(parachlorophenyl) ethane. See TDE										
	Dichloroacetic acid	Corrosive material	UN1764	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	Glass carboys in hampers not permitted under deck
	Dichloroacetyl chloride	Corrosive material	UN1765	Corrosive	173.244	173.247	1 quart	1 gallon	1	4	Keep dry
	Dichloroacetylene	Forbidden									
A	Dichlorobenzene, ortho, liquid	ORM-A	UN1591	None	173.505	173.510	No limit	No limit	1,2	1,2	
A	Dichlorobenzene, para, solid	ORM-A	UN1592	None	173.505	173.510	No limit	No limit	1,2	1,2	
	2,4-Dichlorobenzoyl peroxide, *not more than 75% with water. See* Organic peroxide, solid, n.o.s.		UN2137								
	2,4-Dichlorobenzoyl peroxide, *not more than 52% as a paste. See* Organic peroxide, solid, n.o.s.		UN2138								
	2,4-Dichlorobenzoyl peroxide, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2139								
	2,4-Dichlorobenzoyl peroxide, more than 75% with water	Forbidden									
	Dichlorobutene	Flammable liquid	NA2924	Flammable liquid	173.118	173.119	10 gallons	1 quart	1,2	1	
	Dichlorobutene	Corrosive material	NA2924	Corrosive	173.244	173.245 173.245a	1 quart	10 gallons	1	4	
A	Dichlorodifluoroethylene	ORM-A	NA9018	None	173.505	173.605	10 gallons	55 gallons			
	Dichlorodifluoromethane (*R-12*)	Nonflammable gas	UN1028	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1,2	1,2	
	Dichlorodifluoromethane and difluoroethane mixture (*constant boiling mixture*) (*R-500*). *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										

	Dichlorodifluoromethane (*R–12*) and dichlorotetrafluoroethane (*R–114*) mixture. *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										
	Dichlorodifluoromethane (*R–12*) and chlordifluoromethane (*R–22*) mixture. *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										
	Dichlorodifluoromethane (*R–12*) and trichlorofluoromethane (*R–11*) mixture. *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										
	Dichlorodifluoromethane (*R–12*) and trichlorofluoromethane (*R–11*) and chlorodifluoromethane (*R–22*) mixture. *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										
	Dichlorodifluoromethane (*R–12*) and trichlorotrifluoroethane (*R–113*) mixture. *See* Refrigerant gas, n.o.s. *or* Dispersant gas, n.o.s.										
A	Dichlorodiphenyltrichloroethane. *See* DDT										
	Dichloroethylene	Flammable liquid	UN1150	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Dichloroisopropyl ether	Corrosive material	UN2490	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
A	Dichloromethane *or* Methylene chloride	ORM-A	UN1593	None	173.505	173.605	10 gallons	55 gallons			
	Dichloropentane	Flammable liquid	UN1152	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
A	2,4-Dichlorophenoxyacetic acid	ORM-A	NA2765	None	173.505	173.510	50 pounds	No limit	1,2	1,2	
	2,4-Dichlorophenoxyacetic acid ester		NA2765	None	None	173.510	No limit	No limit	1,2	1,2	
	Dichlorophenyltrichlorosilane	Corrosive material	UN1766	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Dichloropropane. *See* Propylene dichloride										
	Dichloropropene	Flammable liquid	UN2047	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Dichloropropene and propylene dichloride mixture	Flammable liquid	NA2047	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	2,2-Dichloropropionic acid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Dichlorvos	Poison B	NA2783	Poison	173.345	173.346	Forbidden	1 quart	1,2	1,2	
	Dichlorvos mixture, dry	Poison B	NA2783	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Dicumyl peroxide *50% solution*	Organic peroxide	NA2121	Organic peroxide	173.153	173.224	1 quart	1 quart	1,2	4	
	Dicumyl peroxide, *technically pure or* Dicumyl peroxide, *with inert solid. See* Dicumyl peroxide, dry.		UN2121								
	Dicumyl peroxide, dry	Organic peroxide	UN2121	Organic peroxide	173.153	173.154	2 pounds	25 pounds	1,2	1,2	
	Dicyclohexyl peroxydicarbonate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2152								
	Dicyclohexyl peroxydicarbonate, *not more than 91% with water. See* Organic peroxide, solid, n.o.s.		UN2153								
A	Dieldrin	ORM-A	NA2761	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Diesel fuel. *See* Fuel oil										

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Diethanol nitrosamine dinitrate (dry)	Forbidden									
	Diethylamine	Flammable liquid	UN1154	Flammable liquid	173.118	173.119	Forbidden	5 pints	1,3	4	
	Diethyl cellosolve. *See* Ethylene glycol diethyl ether										
	Diethyl dichlorosilane	Flammable liquid	UN1767	Flammable liquid	None	173.135	Forbidden	10 gallons	1	1	Keep dry. Segregation same as for corrosives
	Diethylene glycol dinitrate. See 173.51	Forbidden									
	Diethylgold bromide	Forbidden									
	Diethyl ketone	Flammable liquid	UN1156	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Diethyl peroxydicarbonate, *not more than 27% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2175								
	Diethyl peroxydicarbonate, more than 27% in solution	Forbidden									
	Diethylzinc. See Pyrophic liquid, n.o.s.										
	Difluoroethane (*R-152a*)	Flammable gas	UN1030	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1,2	
	Difluorophosphoric acid, anhydrous	Corrosive material	UN1768	Corrosive	None	173.275	Forbidden	1 gallon	1,2	1,2	
	2,2-Dihydroperoxy propane, *not more than 25% with inert organic solid. See* Organic peroxide, solid, n.o.s.		UN2178								
	Dihydropyran	Flammable liquid	UN2376	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4	
	1,8-Dihydroxy-2,4,5,7-tetranitroanthraquinone (chrysamminic acid)	Forbidden									
	Diiodoacetylene	Forbidden									
	Diisobutyl ketone	Combustible liquid	UN1157	None	173.118a	None	No limit	No limit	1,2	1,2	
	Diisobutyryl peroxide, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2182								
	Diisooctyl acid phosphate	Corrosive material	UN1902	Corrosive	173.244	173.296	1 quart	1 quart	1,2	1,2	Glass carboys in hampers not permitted under deck
	Diisopropylamine	Flammable liquid	UN1158	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	

Diisopropylbenzene hydroperoxide solution, *not over 72% peroxide*	Organic peroxide	UN2171	Organic peroxide	173.153	173.224	1 quart	1 quart	1,2	4
Diisopropylbenzene hydroperoxide, *not more than 72% in solution. See* Diisopropylbenzene hydroperoxide solution, *not more than 72% peroxide.*		UN2171							
Diisopropylbenzene hydroperoxide, more than 72% in solution	Forbidden								
Diisopropyl ether	Flammable liquid	UN1159	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4
Diisotridecyl peroxydicarbonate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2889							
2,5-Dimethyl-2,5-di-(2-ethylhexanoylperoxy)hexane, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2157							
2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2172							
2,5-Dimethyl-2,5-di-(benzoylperoxy)hexane, *not more than 82% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2173							
2,5-Dimethyl-2,5-dihydroperoxy hexane, *not more than 82% with water. See* Dimethylhexane dihydroperoxide, *with 18% or more water.*		UN2174							
2,5-Dimethyl-2,5-dihydroperoxy hexane, more than 82% with water	Forbidden								
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2155							
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexane, *not more than 52% with inert solid. See* Organic peroxide, solid n.o.s.		UN2156							
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2158							
2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3, *not more than 52% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2159							
+ Dimethylamine, anhydrous	Flammable gas	UN1032	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	4
Dimethylamine, aqueous solution	Flammable liquid	UN1160	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1
2,3-Dimethylbutane	Flammable liquid	UN2457	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4
Dimethyl carbonate	Flammable liquid	UN1161	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1
Dimethyl chlorothiophosphate	Corrosive material	NA2922	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2

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	1,4-Dimethylcyclohexane	Flammable liquid	UN2263	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Dimethyldichlorosilane	Flammable liquid	UN1162	Flammable liquid	None	173.135	Forbidden	5 pints	1,2	1	
+	Dimethyl ether	Flammable gas	UN1033	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	
	Dimethylhexane dihydroperoxide (dry)	Forbidden									
	Dimethylhexane dihydroperoxide, (with 18% or more water)	Organic peroxide	UN2174	Organic peroxide	None	173.157	Forbidden	25 pounds	1	1	
	Dimethylhydrazine, unsymmetrical (*UDMH*)	Flammable liquid	UN1163	Flammable liquid and Poison	None	173.145	Forbidden	5 pints	1,2	1	Keep dry. Separate from corrosive and oxidizing materials, and organic peroxides.
	Dimethyl phosphorochloridothioate. *See* Dimethyl clorothiophosphate.										
	Dimethyl sulfate	Corrosive material	UN1595	Corrosive	None	173.255	Forbidden	1 quart	1	5	Keep cool
	Dimethyl sulfide	Flammable liquid	UN1164	Flammable liquid	None	173.119	Forbidden	10 gallons	1,2	5	
	Dimyristyl peroxydicarbonate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2595								
	Dimyristyl peroxydicarbonate, *not more than 22%, stable dispersion, in water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2892								
	1,4-Dinitro-1,1,4,4-tetramethylolbutanetetranitrate (dry)	Forbidden									
	2,4-Dinitro-1,3,5-trimethylbenzene	Forbidden									
	1,3-Dinitro-4,5-dinitrosobenzene	Forbidden									
	1,3-Dinitro-5,5-dimethyl hydantoin	Forbidden									
	Dinitro-7,8-dimethylglycoluril (dry)	Forbidden									
	Dinitrobenzene, solid, *or* Dinitrobenzol, solid	Poison B	UN1597	Poison	173.364	173.371	50 pounds	200 pounds	1,2	1,2	
	Dinitrobenzene solution	Poison B	UN1597	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Dinitrochlorobenzene	Poison B	UN1577	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
A	Dinitrocyclohexylphenol	ORM-A	NA9026	None	173.505	173.510	No limit	No limit			
	1,2-Dinitroethane	Forbidden									
	1,1-Dinitroethane (dry)	Forbidden									
	Dinitroglycoluril	Forbidden									
	Dinitromethane	Forbidden									

Dinitrophenol solution	Poison B	UN1599	Poison	173.345	173.362a	1 quart	65 pounds	1,2	1,2	Stow away from heavy metals and their compounds. If flash point is 141 deg F or less segregation same as for flammable liquids
Dinitropropylene glycol	Forbidden									
2,4-Dinitroresorcinol (heavy metal salts of), (dry)	Forbidden									
4,6-Dinitroresorcinol (heavy metal salts of), (dry)	Forbidden									
3,5-Dinitrosalicylic acid (lead salt), (dry)	Forbidden									
Dinitrosobenzylamidine and salts of (dry)	Forbidden									
2,2-Dinitrostilbene	Forbidden									
Dinitrotoluene, liquid		UN1600	None	None	173.510	No limit	No limit	1,2	1,2	
Dinitrotoluene, solid		UN2038	None	None	173.510	No limit	No limit	1,2	1,2	
a,a'-Di-(nitroxy)methylether	Forbidden									
1,9-Dinitroxy pentamethylene-2,4,6,8-tetramine (dry)	Forbidden									
Di-n-propyl peroxydicarbonate, *technically pure. See* Organic peroxide, liquid, n.o.s.		UN2176								
Dioxane	Flammable liquid	UN1165	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Dioxolane	Flammable liquid	UN1166	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Diphenylaminechloroarsine (*DM*)	Irritating material	UN1698	Irritant	None	173.382	Forbidden	75 pounds	1	5	
Diphenyl dichlorosilane	Corrosive material	UN1769	Corrosive	None	173.280	Forbidden	10 gallons	1	1	
Diphenyl methyl bromide, solid	Corrosive material	UN1770	Corrosive	173.244	173.245b	25 pounds	100 pounds	1	4	
Diphenyl methyl bromide solution	Corrosive material	UN1770	Corrosive	173.244	173.247	1 quart	1 gallon	1,2	1,2	
Diphosgene. See Phosgene										
Diquat		NA2781	None	None	173.510	No limit	No limit	1,2	1,2	
Di-sec-butyl peroxydicarbonate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2150								
Di-sec-butyl peroxydicarbonate, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2151								
Disinfectant, liquid	Corrosive material	UN1903	Corrosive	173.244	173.245	1 quart	10 gallons	1	4	
Disinfectant, liquid	Poison B	UN1601	Poison	173.345	173.346	1 quart	55 gallons	1,2	1	
Disinfectant, liquid, n.o.s.	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
Disinfectant, solid	Poison B	UN1601	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1	
Dispersant gas, n.o.s. *See* Refrigerant gas, n.o.s.										
Distearyl peroxydicarbonate, *not more than 85% with stearyl alcohol. See* Organic peroxide, solid, n.o.s.		UN2592								
Disulfoton	Poison B	NA2783	Poison	None	173.358	Forbidden	1 quart	1,2	5	
Disulfoton mixture, dry	Poison B	NA2783	Poison	173.377	173.377	Forbidden	200 pounds	1,2	4	
Disulfoton mixture, liquid	Poison B	NA2783	Poison	173.359	173.359	½ pint	1 quart	1,2	5	
Di-tert-butyl peroxide, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2102								

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	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, *technically pure. See* Organic peroxide, liquid *or* solution n.o.s.		UN2145								
	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, *not more than 57% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2146								
	1,1-Di-(tert-butylperoxy)-3,3,5-trimethyl cyclohexane, *not more than 58% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2147								
	2,2-Di-(tert-butylperoxy)butane, *not more than 55% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2111								
	2,2-Di-(tert-butylperoxy) butane, more than 55% in solution	Forbidden									
	1,1-Di-(tert-butylperoxy)cyclohexane, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2179								
	1,1-Di-(tert-butylperoxy)cyclohexane, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2180								
	1,2-Di-(tert-butylperoxy)cyclohexane, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2181								
	1,1-Di-(tert-butylperoxy)cyclohexane, *not more than 40% with inert inorganic solid, with not less than 13% phlegmatizer. See* Organic peroxide, solid, n.o.s.		UN2885								
	1,1-Di-(tert-butylperoxy)cyclohexane, *not more than 50% with phlegmatizer. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2897								
	Di-(tert-butylperoxy) phthalate, more than 55% in solution	Forbidden									
	Di-(tert-butylperoxy)phthalate, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2106								
	Di-(tert-butylperoxy)phthalate, *not more than 55% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2107								

Di-(tert-butylperoxy)phthalate, *not more than 55% as a paste. See* Organic peroxide, solid, n.o.s.		UN2108								
2,2-Di-(tert-butylperoxy)propane, *not more than 50% with phlegmatizer. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2883								
2,2-Di-(tert-butylperoxy)propane, *not more than 40% with inert inorganic solid with not less than 13% phlegmatizer. See* Organic peroxide, solid, n.o.s.		UN2884								
Dithiocarbamate pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2772	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Dithiocarbamate pesticide , liquid, n.o.s.(*compounds and preparations*),	Poison B	UN2771	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
Dithiocarbamate pesticide, solid, n.o.s. (*compounds and preparations*),	Poison B	UN2771	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
Diuron		NA2767	None	None	173.510	No limit	No limit	1,2	1,2	
Divinyl ether	Flammable liquid	UN1167	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
Dodecylbenzenesulfonic acid	Corrosive material	NA2584	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
Dodecyl trichlorosilane	Corrosive material	UN1771	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
Driers, paint *or* varnish, liquid, n.o.s	Combustible liquid	UN1168	None	173.118a	None	No limit	No limit	1,2	1,2	
Driers, paint *or* varnish, liquid, n.o.s	Flammable liquid	UN1168	Flammable liquid	173.118 173.128	173.128	1 quart	55 gallons	1,2	1	
Drill cartridge. See 173.55										
Drugs, n.o.s.	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
Drugs, n.o.s.	Flammable solid	NA1325	Flammable solid	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
Drugs, n.o.s.	Oxidizer	NA1479	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
Drugs, n.o.s,	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Drugs, liquid, n.o.s.	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
Drugs, liquid,n.o.s.	Poison B	NA2810	Poison	173.345	173.346	1 quart	55 gallons	1,3	1	
Drugs, solid, n.o.s.	Corrosive material	NA1759	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
Drugs, solid, n.o.s.	Poison B	NA2811	Poison	173.364	173.365	50 pounds	200 pounds	1,3	1,3	
Drums, empty, must be classed for the hazardous material previously contained in drum. See 173.29										
Dry ice. *See* Carbon dioxide, solid										
Dye intermediate, liquid	Corrosive material	UN2801	Corrosive	173.244	173.249a	1 quart	10 gallons	1,2	1,2	Stow away from foodstuffs and living quarters
Dynamite. See High explosive										
Electric blasting caps. See Detonators, Class A *or* Class C explosives										
Electric squib	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
Electrolyte (acid) battery fluid (*not over 47% acid*). *See* Battery fluid, acid.										
Empty cartridge bag with black powder igniter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Empty cartridge case, primed	Class C explosive		Explosive C	None	173.107	50 pounds	150 pounds	1,3	1,3	
	Endosulfan	Poison B	NA2761	Poison	173.364	173.365	1 pound	10 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.
	Endosulfan mixture, liquid	Poison B	NA2761	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Endrin	Poison B	NA2761	Poison	173.364	173.365	1 pounds	10 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.
	Endrin mixture, liquid	Poison B	NA2761	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Engine, internal combustion				173.120						
	Engine starting fluid	Flammable gas	UN1950	Flammable gas	None	173.304	Forbidden	60 pounds	1,2	5	
	Epichlorohydrin	Flammable liquid	UN2023	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	Escape *or* Evacuation slide, inflatable. *See* Life rafts, inflatable										
	Etching acid, liquid, n.o.s.	Corrosive material	NA1760	Corrosive	None	173.299	Forbidden	10 pounds	1	5	
+	Ethane *or* Ethane, compressed	Flammable gas	UN1035	Flammable gas	173.306	173.304	Forbidden	300 pounds	1,2	4	Stow away from living quarters
	Ethane, refrigerated liquid	Flammable gas	UN1961	Flammable gas	None	173.315	Forbidden	Forbidden	1	5	Stow away from living quarters
	Ethane-Propane mixture, refrigerated liquid	Flammable gas	UN1961	Flammable gas	None	173.315	Forbidden	Forbidden	1	5	Stow away from living quarters
	Ethanol. *See* Ethyl alcohol										
	Ethanol amine dinitrate	Forbidden									
	Ethion	Poison B	NA2783	Poison	173.345	173.346	Forbidden	1 quart	1,2	1,2	
	Ethion mixture, dry	Poison B	NA2783	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Ethyl-3,3-di-(tert-butylperoxy)butyrate, *technically pure. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2164								
	Ethyl-3,3-di-(tert-butylperoxy)butyrate, *not more than 77% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2165								
	Ethyl-3,3-di-(tert-butylperoxy)butyrate, *not more than 50% with inert inorganic solid. See* Organic peroxide, solid, n.o.s.		UN2598								
	Ethyl acetate	Flammable liquid	UN1173	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Ethyl acrylate, inhibited	Flammable liquid	UN1917	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	

Ethyl alcohol	Flammable liquid	UN1170	Flammable liquid	173.118	173.125	1 quart	10 gallons	1,2	1	
Ethyl aldehyde. *See* Acetaldehyde										
Ethyl benzene	Flammable liquid	UN1175	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Ethyl borate	Flammable liquid	UN1176	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	Keep dry
Ethyl butyl acetate	Combustible liquid	UN1177	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethyl butyl ether	Flammable liquid	UN1179	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Ethyl butyraldehyde	Flammable liquid	UN1178	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Ethyl butyrate	Flammable liquid	UN1180	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
Ethyl chloride	Flammable liquid	UN1037	Flammable liquid	None	173.123	Forbidden	See 173.123	1,2	1	Segregation same as for flammable gases
Ethyl chloroacetate	Combustible liquid	UN1181	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethyl chloroformate (*chlorocarbonate*)	Flammable liquid	UN1182	Flammable liquid and Poison	None	173.288	Forbidden	5 pints	1,2	1	
Ethyl chlorothioformate	Corrosive material	UN2826	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1,2	1	
Ethyl crotonate	Flammable liquid	UN1862	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Ethyl dichlorosilane	Flammable liquid	UN1183	Flammable liquid	None	173.135	Forbidden	5 pints	1,2	1	
Ethyl phosphonothioic dichloride, anhydrous	Corrosive material	NA1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4	
+ Ethylene *or* Ethylene, compressed	Flammable gas	UN1962	Flammable gas	173.306	173.304	Forbidden	300 pounds	1,2	4	Stow away from living quarters
Ethylene, refrigerated liquid (*cryogenic liquid*)	Flammable gas	UN1038	Flammable gas	None	173.318 173.319	Forbidden	Forbidden	1	5	Stow away from living quarters
Ethylene chlorohydrin	Poison B	UN1135	Poison	173.345	173.346 173.3a	1 quart	55 gallons	1,2	1	Segregation same as for flammable liquids
Ethylenediamine	Corrosive material	UN1604	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
Ethylene diamine diperchlorate	Forbidden									
Ethylenediaminetetraacetic acid		NA9117	None	None	173.510	No limit	No limit	1,2	1,2	
Ethylene dibromide	Poison B	UN1605	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	Stow away from living quarters
Ethylene dichloride	Flammable liquid	UN1184	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Ethylene glycol diethyl ether (*diethyl 'Cellosolve'*)	Flammable liquid	UN1153	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
Ethylene glycol dinitrate	Forbidden									
Ethylene glycol monoethyl ether (*'Cellosolve'*)	Combustible liquid	UN1171	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethylene glycol monoethyl ether acetate (*'Cellosolve acetate'*)	Combustible liquid	UN1172	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethylene glycol monomethyl ether (*methyl 'Cellosolve'*)	Combustible liquid	UN1188	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethylene glycol monomethyl ether acetate (*methyl 'Cellosolve acetate'*)	Combustible liquid	UN1189	None	173.118a	None	No limit	No limit	1,2	1,2	
Ethylene imine, inhibited	Flammable liquid	UN1185	Flammable liquid and Poison	None	173.139	Forbidden	5 pints	1,2	1	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Ethylene oxide	Flammable liquid	UN1040	Flammable liquid	None	173.124	Forbidden	See 173.124	1,2	1	Segregation same as for flammable gases
	Ethyl ether	Flammable liquid	UN1155	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
	Ethyl formate	Flammable liquid	UN1190	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Ethylhexaldehyde	Combustible liquid	UN1191	None	173.118a	None	No limit	No limit	1,2	1,2	
	Ethyl hydroperoxide (explodes above 100 deg C)	Forbidden									
	Ethyl lactate	Combustible liquid	UN1192	None	173.118a	None	No limit	No limit	1,2	1,2	
	Ethyl mercaptan	Flammable liquid	UN2363	Flammable liquid	None	173.141	Forbidden	10 gallons	1,2	1	
	Ethyl methyl ether	Flammable liquid	UN1039	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	1	Segregation same as for flammable gases
	Ethyl methyl ketone	Flammable liquid	UN1193	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Ethyl nitrate (*nitric ether*)	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	Forbidden	Forbidden	1,2	1	
	Ethyl nitrite (nitrous ether)	Flammable liquid	UN1194	Flammable liquid	None	173.119	Forbidden	Forbidden	1,3	5	
	Ethyl perchlorate	Forbidden									
	Ethyl phenyl dichlorosilane	Corrosive material	UN2435	Corrosive	None	173.280	Forbidden	10 gallons	1	5	
	Ethyl phosphonous dichloride. *See* Pyroforic liquid, n.o.s										
	Ethyl phosphorodichloridate	Corrosive material	NA1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4	
	Ethyl propionate	Flammable liquid	UN1195	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Ethyl silicate (*tetraethyl orthosilicate*)	Combustible liquid	UN1292	None	173.118a	None	No limit	No limit	1,2	1,2	
	Ethyl trichlorosilane	Flammable liquid	UN1196	Flammable liquid	None	173.135	Forbidden	5 pints	1,2	1	
	Etiologic agent, n.o.s.	Etiologic agent	NA2814	Etiologic agent	173.386	173.387	See 173.386	4 liters			Not permitted except under specific conditions approved by the Department
	Explosive auto alarm	Class C explosive		Explosive C	None	173.111	50 pounds	150 pounds	1,2	1,2	

	Explosive bomb	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with these items
	Explosive cable cutter	Class C explosive		Explosive C	None	173.102	50 pounds	150 pounds	1,3	1,3	
	Explosive, forbidden. See Sec. 173.51	Forbidden									
	Explosive mine	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with these items
	Explosive, new approval, and evaluation. See 173.86										
	Explosive pest control devices	Class C explosive		Explosive C	None	173.100	50 pounds	150 pounds	1,3	1,3	
	Explosive power device, Class B	Class B explosive		Explosive B	None	173.94	Forbidden	150 pounds	1,2	5	
	Explosive power device, Class C	Class C explosive		Explosive C	None	173.102	50 pounds	150 pounds	1,3	1,3	
	Explosive projectile	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with this material
	Explosive release device	Class C explosive		Explosive C	None	173.102	50 pounds	150 pounds	1,3	1,3	
	Explosive rivet	Class C explosive		Explosive C	None	173.100	50 pounds	150 pounds	1,2	1,2	
	Explosive, sample for laboratory examination				173.86		Forbidden	See 173.86			
	Explosive torpedo	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	Magazine stowage authorized. No other cargo may be stowed in the same hold with this material
	Extract, liquid, flavoring	Flammable liquid	UN1197	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Ferric ammonium citrate		NA9118	None	None	173.510	No limit	No limit	1,2	1,2	
	Ferric ammonium oxalate		NA9119	None	None	173.510	No limit	No limit	1,2	1,2	
	Ferric arsenate, solid	Poison B	UN1606	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Ferric arsenite, solid	Poison B	UN1607	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
A	Ferric chloride, solid, *anhydrous*	ORM-B	UN1773	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
	Ferric chloride solution	Corrosive material	UN2582	Corrosive	173.244	173.245	1 quart	10 quarts	1,2	1,2	
	Ferric fluoride		NA9120	None	None	173.510	No limit	No limit	1,2	1,2	
	Ferric nitrate	Oxidizer	UN1466	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Ferric sulfate		NA9121	None	None	173.510	No limit	No limit	1,2	1,2	
W	Ferrochrome, exothermic	ORM-C		None	173.505	173.985			1	1	
W	Ferromanganese, exothermic. *See* Ferrochrome, exothermic										
W	Ferrophosphorus	ORM-A		None	173.505	173.635			1,2	1,2	Keep dry. Stow away from living quarters
AW	Ferrosilicon, *containing 30% or more but not more than 70% silicon*	ORM-A	UN1408	None	173.505	173.645	Forbidden	25 pounds	1,2	1,2	Keep dry. Stow away from living quarters. Segregation same as for flammable solids labeled Dangerous When Wet
	Ferrous ammonium sulfate		NA9122	None	None	173.510	No limit	No limit	1,2	1,2	
	Ferrous arsenate, solid	Poison B	UN1608	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
A	Ferrous chloride, solid	ORM-B	NA1759	None	173.505	173.510	No limit	No limit	1,2	1,2	
	Ferrous chloride, solution	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	5 gallons	1,2	1,2	
	Ferrous sulfate		NA9125	None	None	173.510	No limit	No limit	1,2	1,2	
	Fertilizer ammoniating solution *containing free ammonia (more than 25.3 p.s.i.g.)*	Nonflammable gas	UN1043	Nonflammable gas	173.306	173.304 173.314	Forbidden	300 pounds	1,2	4	
W	Fibers (*jute, hemp, flax, sisal, coir, kapok, and similar vegetable fibers*)	ORM-C	NA1372	None	173.505	173.965			1,2	1,2	Stow away from animal or vegetable oils. Segregation same as for flammable solids

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)		
					Packaging		Maximum net quantity in one package		Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Film (*nitrocellulose*)	Flammable solid	NA1324	Flammable solid	None	173.177	50 pounds	200 pounds	1,3	1,3	Stow away from other flammable cargo or substances
	Firecracker. See Fireworks, common *or* special										
	Firecracker salute. See Fireworks, common *or* special										
	Fire extinguisher	Nonflammable gas	UN1044	Nonflammable gas	173.306		150 pounds	300 pounds	1,2	1,2	
	Fire extinguisher charge containing not more than 50 grains of propellant explosive per unit. Not subject to requirements of this subchapter.										
	Fire extinguisher charge containing sulfuric acid	Corrosive material	UN1774	Corrosive	173.261		1 quart	1 gallon	1,2	1,2	
	Fireworks, common	Class C explosive		Explosive C	None	173.100 173.108	50 pounds	200 pounds	1,3	1,3	Passenger vessels in metal lockers only
	Fireworks, exhibition display piece. See Fireworks, special										
	Fireworks, special	Class B explosive		Explosive B	None	173.88 173.91	Forbidden	200 pounds	3	3	Passenger vessels in metal lockers only. Toy torpedoes must not be packed with other special fireworks
W	Fish meal *or* fish scrap containing 6% to 12% water	ORM-C	NA2216	None	173.505	173.995			1,2	1,2	Segregation same as for flammable solids. Separate from flammable gases or liquids, oxidizing materials, or organic peroxides. *Use double strip stowage* for cargo 6-12 percent moisture containing not more than 12 percent fat. *Use single strip stowage* for cargo 6-12 percent moisture containing 12-15 percent fat.
	Fish meal *or* fish scrap containing less than 6% or more than 12% water	Flammable solid	NA1374	Flammable solid	None	173.171	Forbidden	Forbidden	1,2	1,2	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
	Fissile radioactive material. *See* Radioactive material, fissile										
	Flame retardant compound liquid	Corrosive material	NA1760	Corrosive	173.244	173.291	1 quart	10 gallons	1,2	1,2	
+	Flammable gas n.o.s. *See* Compressed gas, n.o.s.										
	Flammable liquid, corrosive, n.o.s.	Flammable liquid	UN2924	Flammable liquid and Corrosive	None	173.119	1 quart	1 quart	1,2	1	

	Flammable liquid, n.o.s.	Flammable liquid	UN1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Flammable liquid, poisonous, n.o.s.	Flammable liquid	UN1992	Flammable liquid and Poison	None	173.119	1 quart	10 gallons	1,2	1	
	Flammable solid, corrosive, n.o.s.	Flammable solid	UN2925	Flammable solid and Corrosive	173.153	173.154	25 pounds	25 pounds	1	4	
	Flammable solid, n.o.s.	Flammable solid	UN1325	Flammable solid	173.153	173.154	25 pounds	25 pounds	1,2	1,2	
	Flammable solid, poisonous, n.o.s.	Flammable solid	UN2926	Flammable solid and Poison	173.153	173.154	25 pounds	25 pounds	1,2	1	
	Flare. See Fireworks, common										
	Flare, airplane. See Fireworks, special										
	Flash cartridge. See Fireworks, special *or* Low explosives										
	Flash cracker. See Fireworks, common *or* special										
	Flash powder. See Fireworks, special *or* Low explosives										
	Flexible linear shaped charge, metal clad	Class C explosive		Explosive C	None	173.104	50 pounds	300 pounds	1,3	1,3	
	Flowers of sulfur. *See* Sulfur										
	Fine dust, poisonous	Poison B	NA2811	Poison	173.364	173.368	50 pounds	200 pounds	1,2	1,2	
	Fluoboric acid	Corrosive material	UN1775	Corrosive	173.244	173.283	1 quart	1 gallon	1,2	1,2	
	Fluoric acid. *See* Hydrofluoric acid										
	Fluorine	Nonflammable gas	UN1045	Poison and Oxidizer	None	173.302	Forbidden	Forbidden	1	5	Stow in well ventilated space away from organic materials
	Fluorophosphoric acid, anhydrous. *See* Monofluorophosphoric acid, anhydrous										
	Fluorosilicic acid. *See* Hydrofluorosilicic acid										
	Fluorosulfonic acid *or* Fluosulfonic acid	Corrosive material	UN1777	Corrosive	None	173.274	Forbidden	1 gallon	1	5	Keep dry
	Fluosilicic acid	Corrosive material	UN1778	Corrosive	None	173.265	1 quart	1 gallon	1,2	1,2	
	Forbidden explosives. See 173.51	Forbidden									
	Forbidden materials. See 173.21	Forbidden									
AW	Formaldehyde solution (*flash point more than 141 deg F.; in containers of 110 gallons or less*)	ORM-A	UN2209	None	173.505	173.510	10 gallons	55 gallons	1,2	4	
	Formaldehyde solution (*flash point not more than 141 deg F.; in containers over 110 gallons*)	Combustible liquid	UN1198	None	173.118a	None	10 gallons	55 gallons	1,2	1,2	
AW	Formaldehyde solution (*flash point not more than 141 deg F.; in containers of 110 gallons or less*)	ORM-A	UN1198	None	173.505	173.510	10 gallons	55 gallons	1,2	4	
	Formaldehyde solution (*flash point more than 141 deg F.; in containers over 110 gallons*)	Combustible liquid	UN2209	None	173.118a	None	10 gallons	55 gallons	1,2	1,2	
	Formalin. *See* Formaldehyde solution										
	Formic acid	Corrosive material	UN1779	Corrosive	173.244	173.289	1 quart	5 gallons	1,2	1,2	Glass carboys in hampers not permitted under deck
	Formic acid solution	Corrosive material	UN1779	Corrosive	173.244	173.289	1 quart	5 gallons	1,2	1,2	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Fuel, aviation, turbine engine	Flammable liquid	UN1863	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Fuel, aviation, turbine engine	Combustible liquid	UN1863	None	173.118a	None	No limit	No limit	1,2	1,2	
	Fuel oil	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Fuel oil, diesel. *See* Fuel oil										
	Fuel oil, No. 1, 2, 4, 5 *or* 6	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
	Fulminate of mercury (dry)	Forbidden									
	Fulminate of mercury, wet. See Initiating explosive										
	Fulminating gold	Forbidden									
	Fulminating mercury	Forbidden									
	Fulminating platinum	Forbidden									
	Fulminating silver	Forbidden									
	Fulminic acid	Forbidden									
	Fumaric acid		NA9126	None	None	173.510	No limit	No limit	1,2	1,2	
	Fumaryl chloride	Corrosive material	UN1780	Corrosive	173.244	173.245	1 quart	1 quart	1	1	Glass carboys not permitted
	Fumigant. See 173.152(a) Note 1										
	Furan	Flammable liquid	UN2389	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Furfural	Combustible liquid	UN1199	None	173.118a	None	No limit	No limit	1,2	1	
	Fusee (*railway or highway*)	Flammable solid	NA1325	Flammable solid	None	173.154a	50 pounds	200 pounds	1,3	1,3	
	Fuse igniter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Fuse, instantaneous	Class C explosive		Explosive C	173.100		50 pounds	150 pounds	1,2	1,2	
	Fuse lighter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Fusel oil	Combustible liquid	UN1201	None	173.118a	None	No limit	No limit	1,2	1,2	
	Fuse, mild detonating, metal clad	Class C explosive		Explosive C	None	173.104	50 pounds	300 pounds	1,2	1,2	
	Fuse, safety	Class C explosive		Explosive C	173.100	173.100	50 pounds	300 pounds	1,2	1,2	
	Fuze, combination	Class C explosive		Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3	

Fuze, detonating	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	
Fuze, detonating, Class C explosive	Class C explosive		Explosive C	None	173.113	50 pounds	150 pounds	1,3	1,3	
Fuze, detonating, radioactive	Class A explosive		Explosive A	None	173.69	Forbidden	Forbidden	6	5	
Fuze, percussion	Class C explosive		Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3	
Fuze, time	Class C explosive		Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3	
Fuze, tracer	Class C explosive		Explosive C	None	173.105	50 pounds	150 pounds	1,3	1,3	
Galactsan trinitrate	Forbidden									
Gallium metal, liquid	ORM-B	UN2803	None	None	173.361	Forbidden	Forbidden	1	5	None
Gallium metal, solid	ORM-B	UN2803	None	None	173.362	40 pounds	40 pounds	1,3	1	Shade from radiant heat
Gas cylinder, empty. See Cylinder, empty										
Gas drips, hydrocarbon	Combustible liquid	UN1864	None	173.118a	None	No limit	No limit	1,2	1,2	
Gas drips, hydrocarbon	Flammable liquid	UN1864	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Gas identification set	Poison A	NA9035	Poison gas	None	173.331	Forbidden	Forbidden	1	5	
Gas identification set	Irritating material	NA9035	Irritant	None	173.331	Forbidden	Forbidden	1	5	
Gas mine. See Explosive mine										
Gasohol *(gasoline mixed with ethyl alcohol containing 20% maximum alcohol). See* Gasoline										
Gasoline *(including casing-head and natural)*	Flammable liquid	UN1203	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	4	
Gelatine Dynamite. See High explosive										
Germane	Poison A	UN2192	Poison gas and Flammable gas	None	173.328	Forbidden	Forbidden	1	5	Segregation same as for flammable gases
Glycerol-1,3-dinitrate	Forbidden									
Glycerol monogluconate trinitrate	Forbidden									
Glycerol monolactate trinitrate	Forbidden									
Grenade *without bursting charge. (With incendiary material)*	Class B explosive		Explosive B	None	173.91	Forbidden	Forbidden	3	3	Passenger vessels in metal lockers only
Grenade *without bursting charge. (With smoke charge)* (Smoke grenade)	Class C explosive		Explosive C	None	173.108	50 pounds	150 pounds	1,3	1,3	
Grenade *without bursting charge. (With Poison A gas charge)*	Poison A	NA2016	Poison gas	None	173.330	Forbidden	Forbidden			*See* correct shipping name of applicable Poison A material for stowage, special handling, and special segregation requirements
Grenade *without bursting charge. (With Poison B charge)*	Poison B	NA2016	Poison	None	173.350	Forbidden	Forbidden			*See* correct shipping name of applicable Poison B material for stowage, special handling, and special segregation requirements
Grenade, empty, primed	Class C explosive		None	None	173.107	50 pounds	150 pounds	1,3	1,3	
Grenade, hand *or* rifle, explosive *(with or without gas, smoke, or incendiary material)*	Class A explosive		Explosive A	None	173.56	Forbidden	Forbidden	1,2	5	No other cargo may be stowed in the same hold with these items
Grenade, tear gas	Irritating material	NA2017	Irritant	None	173.385	Forbidden	75 pounds	1,2	1	
Guanidine nitrate	Oxidizer	UN1467	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	Separate from nitro-compounds, chlorates, and acids

§172.101 Hazardous Materials Table

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+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Guanyl nitrosamino guanylidene hydrazine. See Initiating explosive										
	Guanyl nitrosamino guanylidene hydrazine (dry)	Forbidden									
	Guanyl nitrosamino guanyl tetrazene. See Initiating explosive										
	Guided missile, without warhead. See Rocket motor, Class A explosive *or* Rocket motor, Class B explosive										
	Guided missile with warhead. See Rocket ammunition with explosive, illuminating, gas, incendiary, *or* smoke projectile										
	Guncotton. See High explosive										
	Guthion. *See* Azinphos methyl										
	Guthion mixture, liquid. *See* Azinphos methyl mixture, liquid										
	Hafnium metal, dry. (*See 173.214 Note 3*)	Flammable solid	UN2545	Flammable solid	None	173.214	Forbidden	75 pounds	1	5	
	Hafnium metal, wet	Flammable solid	UN1326	Flammable solid	None	173.214	Forbidden	150 pounds	1,2	5	
	Hand signal device	Class C explosive		Explosive C	None	173.108	50 pounds	200 pounds	1,2	1,2	
	Hazardous substance, liquid *or* solid, n.o.s.	ORM-E	NA9188	None	None	173.1800	No limit	No limit	1,2	1,2	
	Hazardous waste, liquid *or* solid, n.o.s. *Hazardous waste, meeting the definition of a hazard class other than ORM-E. See 172.101(c)(10)*	ORM-E	NA9189	None	None	173.1800	Forbidden	550 pounds	1,2	1,2	
	Heater for refrigerator car, liquid fuel type (*containing fuel*)	Flammable liquid	NA1993	Flammable liquid	173.146		Forbidden	Forbidden	1,2	1	
	Helium *or* Helium, compressed	Nonflammable gas	UN1046	Nonflammable gas	173.306	173.302 173.314	150 pounds	300 pounds	1,2	1,2	
	Helium-oxygen mixture	Nonflammable gas	NA1980	Nonflammable gas	173.306	173.302	150 pounds	300 pounds	1,2	1,2	
	Helium, refrigerated liquid (*cryogenic liquid*)	Nonflammable gas	UN1963	Nonflammable gas	173.320	173.316 173.318	100 pounds	1,100 pounds	1,3	1,3	
	Heptachlor		NA2761	None	None	173.510	No limit	No limit	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.
	Heptane	Flammable liquid	UN1206	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Hexachlorocyclopentadiene	Corrosive material	UN2646	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	

W	Hexachloroethane	ORM-A	NA9037	None	173.505	173.650			1,2	1,2	
	Hexadecyltrichlorosilane	Corrosive material	UN1781	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	Hexadiene	Flammable liquid	UN2458	Flammable liquid	None	173.119	Forbidden	10 gallons	1,2	5	
	Hexaethyl tetraphosphate and compressed gas mixture	Poison A	UN1612	Poison gas	None	173.334	Forbidden	Forbidden	1	5	Shade from radiant heat
	Hexaethyl tetraphosphate, liquid	Poison B	UN1611	Poison	None	173.358	Forbidden	1 quart	1	4	
	Hexaethyl tetraphosphate mixture, dry (*containing more than 2% hexaethyl tetraphosphate*)	Poison B	NA2783	Poison	None	173.377	Forbidden	200 pounds	1,2	5	
	Hexaethyl tetraphosphate mixture, dry (*containing not more than 2% hexaethyl tetraphosphate*)	Poison B	NA2783	Poison	173.377	173.377	50 pounds	200 pounds	1,2	4	
	Hexaethyl tetraphosphate mixture, liquid (*containing more than 25% hexaethyl tetraphosphate*)	Poison B	NA2783	Poison	None	173.359	Forbidden	1 quart	1,2	5	
	Hexaethyl tetraphosphate mixture, liquid (*containing not more than 25% hexaethyl tetraphophate*)	Poison B	UN2783	Poison	173.359	173.359	1 quart	1 quart	1,2	4	
	Hexafluorophosphoric acid	Corrosive material	UN1782	Corrosive	None	173.275	Forbidden	1 gallon	1,2	1,2	
	Hexafluoropropylene	Nonflammable gas	UN1858	Nonflammable gas	173.306	173.304 173.314 173.315	150 pounds	300 pounds	1	4	
	Hexafluoropropylene oxide	Nonflammable gas	NA1956	Nonflammable gas	173.306	173.304 173.314	150 pounds	300 pounds	1,2	1,2	
	Hexaldehyde	Flammable liquid	UN1207	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, *technically pure. See* Organic peroxide, solid, n.o.s.		UN2165								
	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, *not more than 52% with inert solid. See* Organic peroxide, solid, n.o.s.		UN2166								
	3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxocyclononane, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2167								
	Hexamethylenediamine, solid	Corrosive material	UN2280	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	
	Hexamethylenediamine, solution	Corrosive material	UN1783	Corrosive	173.244	173.292	1 quart	10 gallons	1,2	1,2	
	Hexamethyleneimine	Flammable liquid	UN2493	Flammable liquid and Corrosive	None	173.119	1 quart	1 gallon	1,2	1	
	Hexamethylene triperoxide diamine (dry)	Forbidden									
	Hexamethylol benzene hexanitrate	Forbidden									
	Hexane	Flammable liquid	UN1208	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	2,2',4,4',6,6'-Hexanitro-3,3'-dihydroxyazobenzene (dry)	Forbidden									
	Hexanitroazoxy benzene	Forbidden									
	2,2',3',4,4',6-Hexanitrodiphenylamine	Forbidden									
	2,3',4,4',6,6'-Hexanitrodiphenylether	Forbidden									

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	N,N'-(hexanitrodiphenyl)ethylene dinitramine (dry)	Forbidden									
	Hexanitrodiphenyl urea	Forbidden									
	Hexanitroethane	Forbidden									
	Hexanitrooxanilide	Forbidden									
	Hexanoic acid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Hexyltrichlorosilane	Corrosive material	UN1784	Corrosive	None	173.280	Forbidden	10 gallons	1	1	Keep dry
	High explosive	Class A explosive		Explosive A	173.65	173.61 to 173.87	Forbidden	Forbidden	6	5	
	High explosive, liquid	Class A explosive		Explosive A	None	173.62	Forbidden	Forbidden	6	5	
	Hydraulic accumulator. *See* Accumulator, pressurized										
	Hydrazine, anhydrous	Flammable liquid	UN2029	Flammable liquid and Poison	None	173.276	Forbidden	5 pints	1	5	Segregation same as for corrosives
	Hydrazine, aqueous solution	Corrosive material	UN2030	Corrosive	None	173.276	Forbidden	5 pints	1	5	
	Hydrazine azide	Forbidden									
	Hydrazine chlorate	Forbidden									
	Hydrazine dicarbonic acid diazide	Forbidden									
	Hydrazine perchlorate	Forbidden									
	Hydrazine selenate	Forbidden									
	Hydriodic acid	Corrosive material	UN1787	Corrosive	173.244	173.245	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel
	Hydrobromic acid, *more than 49% strength*	Corrosive material	UN1788	Corrosive	None	173.262	Forbidden	Forbidden	1	1	Glass carboys not permitted on passenger vessel
	Hydrobromic acid, anhydrous. *See* Hydrogen bromide										
	Hydrobromic acid not more than 49% strength	Corrosive material	UN1788	Corrosive	173.244	173.262	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel
+	Hydrocarbon gas, liquefied	Flammable gas	UN1965	Flammable gas	173.306	173.304 173.314	Forbidden	300 pounds	1,2	1	
+	Hydrocarbon gas, nonliquefied	Flammable gas	UN1964	Flammable gas	173.306	173.302	Forbidden	300 pounds	1,2	1	
	Hydrochloric acid	Corrosive material	UN1789	Corrosive	173.244	173.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel
	Hydrochloric acid, anhydrous. *See* Hydrogen chloride										

	Hydrochloric acid mixture	Corrosive material	NA1789	Corrosive	173.244	173.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel
	Hydrochloric acid solution, inhibited	Corrosive material	UN1789	Corrosive	173.244	173.263	1 quart	1 gallon	1	1	Glass carboys not permitted on passenger vessel
	Hydrocyanic acid (*prussic*) solution (*5% or more hydrocyanic acid*)	Poison A	UN1613	Poison gas andFlammable gas	None	173.332	Forbidden	Forbidden	1	5	Shade from radiant heat. Aqueous solutions containing more than 20 percent hydrogen cyanide are not permitted in transportation by water. Segregation same as for flammable gases.
	Hydrocyanic acid, liquefied	Poison A	NA1051	Poison gas andFlammable gas	None	173.332	Forbidden	Forbidden	1	5	Segregation same as for flammable gases.
	Hydrocyanic acid (prussic), unstabilized	Forbidden									
+	Hydrocyanic acid solution, less than 5% hydrocyanic acid	Poison B	UN1613	Poison	None	173.351	Forbidden	25 pounds	1	5	Shade from radiant heat
	Hydrofluoric acid, anhydrous. *See* Hydrogen fluoride										
	Hydrofluoric acid solution	Corrosive material	UN1790	Corrosive	173.244	173.264	1 quart	1 gallon	1	4	
	Hydrofluoric and sulfuric acid mixture	Corrosive material	UN1786	Corrosive	None	173.290	Forbidden	1 gallon	1	5	
	Hydrofluoroboric acid. *See* Fluoboric acid										
	Hydrofluorosilicic acid *or* Hydrofluosilicic acid	Corrosive material	NA1778	Corrosive	None	173.265	1 quart	1 gallon	1,2	1,2	
+	Hydrogen *or* Hydrogen, compressed	Flammable gas	UN1049	Flammable gas	173.306	173.302 173.314	Forbidden	300 pounds	1,2	4	Stow away from living quarters
+	Hydrogen, refrigerated liquid (*cryogenic liquid*)	Flammable gas	UN1966	Flammable gas	None	173.316 173.318 173.319	Forbidden	Forbidden	5	5	
	Hydrogen bromide	Nonflammable gas	UN1048	Nonflammable gas	173.306	173.304	Forbidden	300 pounds	1	4	
	Hydrogen chloride*or* Hydrogen chloride, anhydrous (RQ 5000/2270)	Nonflammable gas	UN1050	Nonflammable gas	173.306	173.304	Forbidden	300 pounds	1	4	Stow away from living quarters
	Hydrogen chloride, refrigerated liquid	Nonflammable gas	UN2186	Nonflammable gas	None	173.314 173.315	Forbidden	300 pounds	1.2	4	Stow in well ventilated space
	Hydrogen fluoride	Corrosive material	UN1052	Corrosive	None	173.264	Forbidden	110 pounds	1	5	Segregation same as for nonflammable gases
	Hydrogen iodide solution. *See* Hydriodic acid										
	Hydrogen peroxide solution (*40% to 52% peroxide*)	Oxidizer	UN2014	Oxidizer	173.244	173.266	Forbidden	Forbidden	1	4	Shade from radiant heat. Separate from permanganates. Keep away from powdered metals
	Hydrogen peroxide solution (*8% to 40% peroxide*)	Oxidizer	UN2014	Oxidizer	173.244	173.266	1 quart	1 gallon	1,2	1	Shade from radiant heat. Separate from permanganates. Keep away from powdered metals
	Hydrogen peroxide solution (*over 52% peroxide*)	Oxidizer	UN2015	Oxidizer and Corrosive	None	173.266	Forbidden	Forbidden	1	5	Shade from radiant heat. Separate from permanganates. Keep away from powdered metals. Concentrations greater than 60% hydrogen peroxide not permitted on any vessel except under conditions approved by the Department
+	Hydrogen selenide	Flammable gas	UN2202	Flammable gas and Poison	None	173.328	Forbidden	Forbidden	1	5	
	Hydrogen sulfate. *See* Sulfuric acid										

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+	Hydrogen sulfide	Flammable gas	UN1053	Flammable gas and Poison	None	173.304 173.314	Forbidden	300 pounds	1	5	
	Hydrosilicofluoric acid. *See* Hydrofluorosilicic acid										
	Hydroxyl amine iodide	Forbidden									
	Hypochlorite solution *containing more than 7% available chlorine by weight*	Corrosive material	UN1791	Corrosive	173.244	173.277	1 quart	4 gallons	1,2	1	Glass carboys in hampers not permitted under deck
A	Hypochlorite solution containing not more than 7% available chlorine *by weight*	ORM-B	NA1791	None	173.505	173.510	No limit	No limit			
	Hyponitrous acid	Forbidden									
	Igniter	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Igniter cord	Class C explosive		Explosive C	None	173.100	50 pounds	150 pounds	1,3	1,3	
	Igniter fuse, metal clad	Class C explosive		Explosive C	None	173.106	50 pounds	150 pounds	1,3	1,3	
	Igniter, jet thrust (jato)	Class A explosive		Explosive A	None	173.79	Forbidden	Forbidden	6	5	
	Igniter, jet thrust (jato)	Class B explosive		Explosive B	None	173.92	Forbidden	550 pounds	1,3	5	
	Igniter, rocket motor	Class A explosive		Explosive A	None	173.79	Forbidden	Forbidden	6	5	
	Igniter, rocket motor	Class B explosive		Explosive B	None	173.92	Forbidden	550 pounds	1,3	5	
	Illuminating projectile. See Fireworks, special										
	Iminobispropylamine	Corrosive material	UN2269	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Infectious substance, human, n.o.s. *See* Etiologic Agent n.o.s.										
	Initiating explosive (*diazodinitrophenol*)	Class A explosive		Explosive A	None	173.70	Forbidden	Forbidden	6	5	
	Initiating explosive (*fulminate of mercury*)	Class A explosive		Explosive A	None	173.71	Forbidden	Forbidden	6	5	
	Initiating explosive (*guanyl nitrosamino guanylidene hydrazine*)	Class A explosive		Explosive A	None	173.72	Forbidden	Forbidden	6	5	
	Initiating explosive (*lead azide, dextrinated type only*)	Class A explosive		Explosive A	None	173.73	Forbidden	Forbidden	6	5	
	Initiating explosive (*lead mononitroresorcinate*)	Class A explosive		Explosive A	None	173.70	Forbidden	Forbidden	6	5	

Initiating explosive *barium styphnate, monohydrate, lead styphnate (lead trinitroresorcinate)*	Class A explosive		Explosive A	None	173.74	Forbidden	Forbidden	6	5	
Initiating explosive (*nitro mannite*)	Class A explosive		Explosive A	None	173.75	Forbidden	Forbidden	6	5	
Initiating explosive (*nitrosoguanidine*)	Class A explosive		Explosive A	None	173.76	Forbidden	Forbidden	6	5	
Initiating explosive (*pentaerythrite tetranitrate*)	Class A explosive		Explosive A	None	173.77	Forbidden	Forbidden	6	5	
Initiating explosive (*tetrazene (guanyl nitrosamine guanyl tetrazene)*)	Class A explosive		Explosive A	None	173.78	Forbidden	Forbidden	6	5	
Initiating explosives (dry)	Forbidden									
Ink	Combustible liquid	UN1210	None	173.118a	None	No limit	No limit	1,2	1,2	
Ink	Flammable liquid	UN1210	Flammable liquid	173.118	173.144	1 quart	10 gallons	1,2	1	
Inositol hexanitrate (dry)	Forbidden									
Insecticide, dry, n.o.s.	Poison B	NA2588	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
Insecticide, liquefied gas (*containing no Poison A or B material*)	Nonflammable gas	NA1968	Nonflammable gas	173.306	173.304	150 pounds	300 pounds	1,2	1,2	
Insecticide, liquefied gas, containing Poison A material *or* Poison B material	Poison A	NA1967	Poison gas	None	173.329 173.334	Forbidden	Forbidden	1	5	Shade from radiant heat
Insecticide, liquid, n.o.s.	Combustible liquid	NA1993	None	173.118a	None	No limit	No limit	1,2	1,2	
Insecticide, liquid, n.o.s.	Flammable liquid	NA1993	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Insecticide, liquid, n.o.s.	Poison B	NA2902	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
Inulin trinitrate (dry)	Forbidden									
Iodine azide (dry)	Forbidden									
Iodine monochloride	Corrosive material	UN1792	Corrosive	None	173.293	Forbidden	1 quart	1	5	Keep dry
Iodine pentafluoride	Oxidizer	UN2495	Oxidizer and Poison	None	173.246	Forbidden	100 pounds	1	1	Keep dry
Iodoxy compounds (dry)	Forbidden									
Iridium nitratopentamine iridium nitrate	Forbidden									
Iron chloride, solid. *See* Ferric chloride, solid										
Iron mass *or* sponge, *not properly oxidized*	Flammable solid	NA1383	Flammable solid	None	173.174	Forbidden	Forbidden	1,2	5	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
Iron mass *or* sponge, spent	Flammable solid	UN1376	Flammable solid	None	173.174	Forbidden	Forbidden	1,2	5	Separate from flammable gases or liquids, oxidizing materials, or organic peroxides
Iron oxide, spent. *See* Iron mass *or* sponge, spent										
Iron sesquichloride, solid. *See* Ferric chloride										
Irritating agent, n.o.s.	Irritating material	NA1693	Irritant	None	173.382	Forbidden	75 pounds	1	1	Stow away from living quarters
Isobutane *or* Liquefied petroleum gas. *See* Liquefied petroleum gas										
Isobutyl acetate	Flammable liquid	UN1213	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Isobutylamine	Flammable liquid	UN1214	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Isobutylene *or* Liquefied petroleum gas. *See* Liquefied petroleum gas										
Isobutyric acid	Corrosive material	UN2529	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)		
					Packaging		Maximum net quantity in one package		Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Isobutyric anhydride	Corrosive material	UN2530	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Isononanyl peroxide, *technically pure or* Isononanyl peroxide, *in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2128								
	Isooctane	Flammable liquid	UN1262	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	1	
	Isooctene	Flammable liquid	UN1216	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Isopentane	Flammable liquid	UN1265	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,3	4	
	Isopentanoic acid	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Isoprene	Flammable liquid	UN1218	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,3	4	
	Isopropanol	Flammable liquid	UN1219	Flammable liquid	173.118	173.125	1 quart	10 gallons	1,2	1	
	Isopropanolamine dodecylbenzenesulfonate		NA9127	None	None	173.510	No limit	No limit	1,2	1,2	
	Isopropyl acetate	Flammable liquid	UN1220	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Isopropyl acid phosphate, solid	Corrosive material	UN1793	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	
	Isopropyl alcohol. *See* Isopropanol										
	Isopropylamine	Flammable liquid	UN1221	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
	Isopropyl mercaptan	Flammable liquid	UN2703	Flammable liquid	None	173.141	Forbidden	10 gallons	1,3	5	
	Isopropyl nitrate	Flammable liquid	UN1222	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Isopropyl percarbonate, stabilized	Organic peroxide	NA2134	Organic peroxide	None	173.262	Forbidden	Forbidden	5	5	
	Isopropyl percarbonate, unstabilized	Organic peroxide	NA2133	Organic peroxide	None	173.218	Forbidden	Forbidden	5	5	
	Isopropyl peroxydicarbonate, *technically pure. See* Isopropyl percarbonate, unstabilized		UN2133								
	Isopropyl peroxydicarbonate, *not more than 52% in solution. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2154								

	Isopropyl phosphoric acid, solid. *See* Isopropyl acid phosphate, solid										
	Isothiocyanic acid (polymerization hazard)	Forbidden									
	Jet thrust igniter. *See* Igniter, jet thrust										
	Jet thrust unit (*jato*)	Class A explosive		Explosive A	None	173.79	Forbidden	Forbidden	6	5	
	Jet thrust unit (*jato*)	Class B explosive		Explosive B	None	173.92	Forbidden	550 pounds	1,3	5	
	Kelthane		NA2761	None	None	173.510	No limit	No limit	1,2	1,2	
	Kepone		NA2761	None	None	173.510	No limit	No limit	1,2	1,2	
	Kerosene	Combustible liquid	UN1223	None	173.118a	None	No limit	No limit	1,2	1,2	
	Lacquer base *or* Lacquer chips, plastic (*wet with alcohol or solvent*)	Flammable liquid	UN1263	Flammable liquid	173.118	173.127	1 quart	25 pounds	1,2	1	
	Lacquer base, *or* Lacquer chips, dry	Flammable solid	NA2557	Flammable solid	173.153	173.175	25 pounds	100 pounds	1	1	
	Lauroyl peroxide	Organic peroxide	UN2124	Organic peroxide	173.153	173.157 173.158	2 pounds	25 pounds	1,2	1	
	Lauroyl peroxide, *not more than 42%, stable dispersion, in water. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2893								
	Lauroyl peroxide, *technically pure. See* Lauroyl peroxide.		UN2124								
	Lead acetate		UN1616	None	None	173.510	No limit	No limit	1,2	1,2	
	Lead arsenate, solid	Poison B	UN1617	Poison	173.364	173.367	50 pounds	200 pounds	1,2	1,2	
	Lead arsenite, solid	Poison B	UN1618	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Lead azide. See Initiating explosive										
	Lead azide (dry)	Forbidden									
A	Lead chloride	ORM-B	NA2291	None	173.505	173.800	25 pounds	100 pounds	1,2	1,2	
	Lead cyanide	Poison B	UN1620	Poison	173.370		25 pounds	No limit	1,2	1,2	Stow away from acids
W	Lead dross (*containing 3% or more free acid*)	ORM-C	NA1794	None	173.505	173.1010			1,2	1,2	Segregation same as for corrosive materials
A	Lead fluoborate	ORM-B	NA2291	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
A	Lead fluoride	ORM-B	NA2811	None	173.505	173.510	25 pounds	100 pounds	1,2	1,2	
	Lead iodide		NA2811	None	None	173.510	No limit	No limit	1,2	1,2	
	Lead mononitroresorcinate. See Initiating explosive										
	Lead mononitroresorcinate (dry)	Forbidden									
	Lead nitrate	Oxidizer	UN1469	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs
	Lead peroxide	Oxidizer	UN1872	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	Stow away from foodstuffs
	Lead picrate (dry)	Forbidden									
W	Lead scrap. *See* Lead dross										
	Lead stearate		NA2811	None	None	173.510	No limit	No limit	1,2	1,2	
	Lead styphnate (dry)	Forbidden									
	Lead styphnate (lead trinitroresorcinate). See Initiating explosive										
	Lead sulfate (RQ-5000/2270)		NA2291	None	None	173.510	No limit	No limit	1,2	1,2	
	Lead sulfate, solid (*containing more than 3% free acid*)	Corrosive material	UN1794	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	
	Lead sulfide		NA2291	None	None	173.510	No limit	No limit	1,2	1,2	
	Lead thiocyanate		NA2291	None	None	173.510	No limit	No limit	1,2	1,2	
	Life rafts, inflatable	ORM-C		None	None	173.906	1 per inaccessible cargo compartment	No limit	1,2	1,2	

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Lime-nitrogen. See Calcium cyanamide, not hydrated										
	Lime, unslaked. *See* Calcium oxide										
A	Lindane	ORM-A	NA2761	None	173.505	173.510	No limit	No limit	1,2	1,2	
+	Liquefied hydrocarbon gas. *See* Hydrocarbon gas, liquefied										
	Liquefied nonflammable gas (*charged with nitrogen, carbon dioxide, or air*)	Nonflammable gas	NA1058	Nonflammable gas	173.306	173.304	300 pounds	300 pounds	1,2	1,2	
+	Liquefied petroleum gas	Flammable gas	UN1075	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	
	Liquid other than one classed as flammable, corrosive, poison or irritant, charged with nitrogen, carbon dioxide, or air. See Compressed gas n.o.s.										
	Lithium acetylide-ethylene diamine complex	Flammable solid	NA2813	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solid labeled Dangerous When Wet
	Lithium aluminum hydride	Flammable solid	UN1410	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solid labeled Dangerous When Wet
	Lithium aluminum hydride, ethereal	Flammable liquid	UN1411	Flammable liquid	None	173.137	Forbidden	1 quart	1	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium amide, powdered	Flammable solid	UN1412	Flammable solid	173.153	173.168	25 pounds	100 pounds	1,2	4	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium batteries, for disposal *Lithium battery. See 173.206(f).*	ORM-C		None	None	173.1015	Forbidden	Forbidden			
	Lithium borohydride	Flammable solid	UN1413	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium chromate		NA9134	None	None	173.510	No limit	No limit	1,2	1,2	
	Lithium ferrosilicon	Flammable solid	UN2830	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet

	Lithium hydride	Flammable solid	UN1414	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium hydride in fused solid form	Flammable solid	UN2805	Flammable solid and Dangerous when wet	None	173.206	Forbidden	100 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium hypochlorite compound, dry (*containing more than 39% available chlorine*)	Oxidizer	UN1471	Oxidizer	173.153	173.217	50 pounds	100 pounds	1,2	1,2	
	Lithium metal	Flammable solid	UN1415	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium metal, in cartridges	Flammable solid	UN1415	Flammable solid and Dangerous when wet	173.206	173.206	1 pound	25 pounds	1,2	4	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium nitride	Flammable solid	UN2806	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	5	Segregation same as for flammable solids labeled Dangerous When Wet
	Lithium peroxide	Oxidizer	UN1472	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	Keep dry
	Lithium silicon	Flammable solid	UN1417	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
	London purple, solid	Poison B	UN1621	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Low blasting explosive. See Low explosive										
	Low explosive	Class A explosive		Explosive A	None	173.60	Forbidden	Forbidden	6	5	
	Lye. See Sodium hydroxide, solid										
	Magnesium aluminum phosphide	Flammable solid	UN1419	Flammable solid and Dangerous when wet	None	173.206	Forbidden	25 pounds	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
+	Magnesium arsenate, solid	Poison B	UN1622	Poison	173.364	173.367	50 pounds	200 pounds	1,2	1,2	
	Magnesium dross, wet or hot. See 173.173	Forbidden									
	Magnesium granules coated, *particle size not less than 149 microns*	Flammable solid	UN2950	Flammable solid and Dangerous when wet	173.153	173.178	25	100	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
	Magnesium metal (*powder, pellets, turnings, or ribbon*) *or* Magnesium aluminum powder	Flammable solid	UN1869	Flammable solid and Dangerous when wet	173.153	173.220	25	100	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
	Magnesium nitrate	Oxidizer	UN1474	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Magnesium perchlorate	Oxidizer	UN1475	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,3	1,3	Stow away from powdered metals
	Magnesium peroxide, solid	Oxidizer	UN1476	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	Keep dry
	Magnesium scrap (*borings, clippings, shavings, sheet, turnings, or scalpings*)	Flammable solid	NA1869	Flammable solid and Dangerous when wet	173.153	173.220	Forbidden	Forbidden	1,2	1,2	Segregation same as for flammable solids labeled Dangerous When Wet
A	*Magnetized material. See* 173.21(f)										
A	Malathion	ORM-A	NA2783	None	173.505	173.510	No limit	No limit	1,2	1,2	
A	Maleic acid	ORM-A	NA2215	None	173.505	173.510	50 pounds	200 pounds	1,2	1,2	Keep tightly closed.

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
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AW	Maleic anhydride	ORM-A	UN2215	None	173.505	173.510	50 pounds	200 pounds	1,2	1,2	Stow away from foodstuffs
	Mannitan tetranitrate	Forbidden									
	Matches, block. See Matches, strike anywhere										
	Matches, safety, *book, card, or strike-on box*	Flammable solid	UN1944	None	173.176	None	50 pounds	50 pounds	1,2	1,2	
	Matches, strike anywhere	Flammable solid	UN1331	Flammable solid	None	173.176a	Forbidden	Forbidden	1,2	1	
	Matting acid. *See* Sulfuric acid										
	Medicines, n.o.s.	Combustible liquid	UN1851	None	173.118a	None	No limit	No limit	1,2	1,2	
	Medicines, n.o.s.	Flammable liquid	UN1851	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Medicines, n.o.s.	Flammable solid	UN1851	Flammable solid	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
	Medicines, n.o.s.	Oxidizer	UN1851	Oxidizer	173.153	173.154	25 pounds	100 pounds	1,2	1,2	
	Medicines, liquid, n.o.s.	Corrosive material	UN1851	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
	Medicines, liquid, n.o.s.	Poison B	UN1851	Poison	173.345	173.346	1 quart	55 gallons	1,3	1	
	Medicines, solid, n.o.s.	Corrosive material	UN1851	Corrosive	173.244	173.245b	25 pounds	100 pounds	1,2	1,2	Keep dry
	Medicines, solid, n.o.s., p-Menthane hydroperoxide, *technically pure. See* Paramenthane hydroperoxide	Poison B	UN1851 UN2125	Poison	173.364	173.365	50 pounds	200 pounds	1,3	1,3	
	Mercaptan mixture, aliphatic	Flammable liquid	NA1228	Flammable liquid	None	173.141	Forbidden	10 gallons	1,3	5	
	Mercaptan mixture, aliphatic (*in containers over 110 gallons*)	Combustible liquid	NA1228	None	173.118a	None	Forbidden	10 gallons	1,2	1,2	
AW	Mercaptan mixture, aliphatic (*in containers of 110 gallons or less). See 173.141(b)*	ORM-A	NA1228	None	173.505	173.510	Forbidden	10 gallons	1,3	5	Stow in well ventilated space away from living quarters
	Mercaptodimethur		NA2757	None	None	173.510	No limit	No limit	1,2	1,2	
+	Mercuric acetate	Poison B	UN1629	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric ammonium chloride, solid	Poison B	UN1630	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric benzoate, solid	Poison B	UN1631	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric bromide, solid	Poison B	UN1634	Poison	173.364	173.365	Forbidden	25 pounds	1,2	1,2	
	Mercuric chloride, solid	Poison B	UN1624	Poison	173.364	173.372	Forbidden	25 pounds	1,2	1,2	
+	Mercuric cyanide, solid	Poison B	UN1636	Poison	173.370	173.370	25 pounds	200 pounds	1,2	1,2	Stow away from acids
	Mercuric iodide, solid	Poison B	UN1638	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercuric iodide, solution	Poison B	UN1638	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Mercuric nitrate	Oxidizer	UN1625	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	If stowed under deck, must be stowed in a recoverable location.

+	Mercuric oleate, solid	Poison B	UN1640	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercuric oxide, solid	Poison B	UN1641	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric oxycyanide, solid (desensitized)	Poison B	UN1642	Poison	173.364	173.365	25 pounds	200 pounds	1,2	1,2	Stow away from acids
+	Mercuric potassium cyanide, solid	Poison B	UN1626	Poison	173.364	173.365 173.370	25 pounds	200 pounds	1,2	1,2	Stow away from acids
+	Mercuric potassium iodide, solid	Poison B	UN1643	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric salicylate, solid	Poison B	UN1644	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric subsulfate, solid	Poison B	NA2025	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric sulfate, solid	Poison B	UN1645	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercuric sulfocyanate, solid *or* Mercuric thiocyanate, solid	Poison B	UN1646	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercurol *or* Mercury nucleate, solid	Poison B	UN1639	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercurous acetate, solid	Poison B	UN1629	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercurous azide	Forbidden									
+	Mercurous bromide, solid	Poison B	UN1634	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercurous gluconate, solid	Poison B	UN1637	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercurous iodide, solid	Poison B	UN1638	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercurous nitrate, solid	Oxidizer	UN1627	Oxidizer	173.153	173.154	50 pounds	100 pounds	1,2	1,2	
+	Mercurous oxide, black, solid	Poison B	UN1641	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Mercurous sulfate, solid	Poison B	UN1628	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercury acetylide	Forbidden									
	Mercury based pesticide, liquid, n.o.s. (*compounds and preparations*),	Flammable liquid	UN2778	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Mercury based pesticide, liquid, n.o.s. (*compounds and preparations*),	Poison B	UN2777	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Mercury based pesticide, solid, n.o.s. (*compounds and preparations*),	Poison B	UN2777	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercury compound, solid, n.o.s.	Poison B	UN2025	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mercury fulminate. See Initiating explosive										
	Mercury iodide aquabasic ammonobasic (Iodide of Million's base)	Forbidden									
A	Mercury, metallic	ORM-B	NA2809	None	None	173.860	173.860	See 173.860			
	Mercury nitride	Forbidden									
	Mercury oxycyanide	Forbidden									
	Mesityl oxide	Flammable liquid	UN1229	Flammable liquid	None	173.119	1 quart	10 gallons	1,2	1,2	
	Metal alkyl, solution, n.o.s.	Flammable liquid	NA9195	Flammable liquid	173.118	173.119	1 quart	1 gallon	1,2	1	
W	Metal borings, shavings, turnings, *or* cuttings (*ferrous metals only, except stainless steel*)	ORM-C	UN2793	None	173.505	173.1025			1,2	1,2	Keep dry, not permitted if temperature of material is at or above 130 deg F
	Metal salts of methyl nitramine (dry)	Forbidden									
+	Methane *or* Methane, compressed	Flammable gas	UN1971	Flammable gas	173.306	173.302	Forbidden	300 pounds	1,2	4	Stow away from living quarters
	Methane, refrigerated liquid (*cryogenic liquid*)	Flammable gas	UN1972	Flammable gas	None	173.318	Forbidden	Forbidden	1	5	Stow away from living quarters
	Methanol. *See* Methyl alcohol										
	Methazoic acid	Forbidden									
	Methoxychlor		NA2761	None	None	173.510	No limit	No limit	1,2	1,2	
	Methyl acetate	Flammable liquid	UN1231	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl acetone	Flammable liquid	UN1232	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
+	Methylacetylene-propadiene, stabilized	Flammable gas	UN1060	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	

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	Methyl acrylate, inhibited	Flammable liquid	UN1919	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methylal	Flammable liquid	UN1234	Flammable liquid	None	173.119	Forbidden	10 gallons	1,3	5	
	Methyl alcohol	Flammable liquid	UN1230	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
+	Methylamine, anhydrous	Flammable gas	UN1061	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1	4	
	Methylamine, aqueous solution	Flammable liquid	UN1235	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	Stow away from mercury and its compounds
	Methylamine dinitramine and dry salts thereof	Forbidden									
	Methylamine nitroform	Forbidden									
	Methylamine perchlorate (dry)	Forbidden									
	Methylamyl acetate	Flammable liquid	UN1233	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1,2	
	Methyl amyl ketone	Combustible liquid	UN1110	None	173.118a	None	No limit	No limit	1,2	1,2	
+	Methyl bromide and more than 2% chloropicrin mixture, liquid	Poison B	NA1581	Poison	None	173.353	Forbidden	Forbidden	1	5	Shade from radiant heat
+	Methyl bromide and nonflammable, nonliquefied compressed gas mixture, liquid (*including up to 2% chloropicrin*)	Poison B	NA1955	Poison	None	173.353a	Forbidden	300 pounds	1	5	Stow away from living quarters
+	Methyl bromide - ethylene dibromide mixture, liquid	Poison B	UN1647	Poison	None	173.353	Forbidden	55 gallons	1	1	
+	Methyl bromide, liquid (*including up to 2% chloropicrin*)	Poison B	UN1062	Poison	None	173.353	Forbidden	55 gallons	1	5	Stow away from living quarters. Segregation same as for nonflammable gas.
	Methyl butene	Flammable liquid	UN2460	Flammable liquid	None	173.119	Forbidden	10 gallons	1,2	5	
	Methyl butyrate	Flammable liquid	UN1237	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl cellosolve. See Ethylene glycol monomethyl ether										
	Methyl cellosolve acetate. See Ethylene glycol monomethyl ether acetate										
+	Methyl chloride	Flammable gas	UN1063	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	4	
+	Methyl chloride-methylene chloride mixture	Flammable gas	UN1912	Flammable gas	173.306	173.304 173.314	Forbidden	300 pounds	1,2	4	

Methyl chlorocarbonate. *See* Methyl chloroformate										
A Methyl chloroform. *See* 1,1,1-Trichloroethane										
Methyl chloroformate	Flammable liquid	UN1238	Flammable liquid and Poison	None	173.288	Forbidden	5 pints	1,2	1	
Methylchloromethyl ether, anhydrous	Flammable liquid	UN1239	Flammable liquid and Poison	None	173.148	Forbidden	Forbidden	1	5	Shade from radiant heat
Methyl cyanide	Flammable liquid	UN1648	Flammable liquid	173.118	173.119	1 quart	10 gallons	1	4	Shade from radiant heat
Methylcyclohexane	Flammable liquid	UN2296	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Methylcyclopentane	Flammable liquid	UN2298	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
Methyl dichloroacetate	Corrosive material	UN2299	Corrosive	173.244	173.245	1 quart	1 quart	1,2	1,2	
Methyldichloroarsine	Poison A	NA1556	Poison gas	None	173.328	Forbidden	Forbidden	1	5	Shade from radiant heat
Methyl dichlorosilane	Flammable liquid	UN1242	Flammable liquid	None	173.136	Forbidden	5 pints	1,2	1	
Methylene chloride. *See* Dichloromethane										
Methylene glycol dinitrate	Forbidden									
Methyl ethyl ether. *See* Ethyl methyl ether										
Methyl ethyl ketone	Flammable liquid	UN1193	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Methyl ethyl ketone peroxide, *in solution with not more than 9% by weight active oxygen. See* Organic peroxide, liquid, *or* solution, n.o.s.		UN2550								
Methyl ethyl ketone peroxide, in solution with more than 9% by weight active oxygen	Forbidden									
Methyl ethyl pyridine	Corrosive material	UN2300	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
Methyl formate	Flammable liquid	UN1243	Flammable liquid	173.118	173.119	Forbidden	10 gallons	1,3	4	
Methylfuran	Flammable liquid	UN2301	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
a-Methylglucoside tetranitrate	Forbidden									
a-Methylglycerol trinitrate	Forbidden									
Methylhydrazine	Flammable liquid	UN1244	Flammable liquid and Poison	None	173.145	Forbidden	5 pints	1,2	1	Stow separate from oxidizing materials and corrosives
Methyl isobutyl ketone peroxide, *in solution with not more than 9% by weight active oxygen. See* Organic peroxide, liquid *or* solution, n.o.s.		UN2126								
Methyl isobutyl ketone peroxide, in solution with more than 9% by weight active oxygen	Forbidden									
Methyl isocyanate	Flammable liquid	UN2480	Flammable liquid and Poison	None	173.119 173.3a	Forbidden	10 gallons	1	5	Keep cool. Stow away from living quarters and sources of heat
Methyl isopropenyl ketone, inhibited	Flammable liquid	UN1246	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
Methyl magnesium bromide in ethyl ether *not over 40% concentration*	Flammable liquid	UN1928	Flammable liquid	None	173.149	Forbidden	Forbidden	1	1	Segregation same as for flammable solids. Separate from flammable gases or liquids, oxidizing materials or organic peroxides

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5)		(6)		(7)		
					Packaging		Maximum net quantity in one package		Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
+	Methyl mercaptan	Flammable gas	UN1064	Flammable gas	173.306	173.304 173.314 173.315	Forbidden	300 pounds	1,2	1	
	Methyl methacrylate monomer, inhibited	Flammable liquid	UN1247	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl methacrylate monomer, uninhibited (*high-purity, if acceptable under 173.21 of this subchapter*)	Flammable liquid	NA1247	Flammable liquid	173.118	173.119	Forbidden	Forbidden	1,2	1	
	Methyl nitrate	Forbidden									
	N-Methyl-N'-nitro-N-nitrosoguanidine (*not exceeding 25 grams in one outside packaging*)	Flammable solid	NA1325	Flammable solid	None	173.179	Forbidden	Forbidden	4	5	
	Methyl parathion, liquid	Poison B	NA2783	Poison	None	173.358	Forbidden	1 quart	1,2	1,2	
	Methyl parathion mixture, dry	Poison B	NA2783	Poison	173.377	173.377	50 pounds	200 pounds	1,2	1,2	
	Methyl parathion mixture, liquid, (containing 25% or less methyl parathion)	Poison B	NA2783	Poison	None	173.359	1/2 pint	1 quart	1,2	1,2	
	Methyl parathion mixture, liquid, (*containing over 25% methyl parathion*)	Poison B	NA2783	Poison	None	173.359	Forbidden	1 quart	1,2	1,2	
	Methylpentadiene	Flammable liquid	UN2461	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl pentane	Flammable liquid	UN2462	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl phosphonothioic dichloride, anhydrous	Corrosive material	NA1760	Corrosive	173.244	173.245 173.245a	1 quart	1 quart	1	4	
	Methyl phosphonic dichloride	Corrosive material	NA9206	Corrosive and Poison	None	173.271	Forbidden	1 quart	1	1	Keep dry. Glass carboys not permitted on passenger vessels
	Methyl phosphonous dichloride. *See* Pyroforic liquid, n.o.s										
	Methyl picric acid (heavy metal salts of)	Forbidden									
	Methyl propionate	Flammable liquid	UN1248	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl propyl ketone	Flammable liquid	UN1249	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Methyl sulfate. *See* Dimethyl sulfate										
	Methyl sulfide. *See* Dimethyl sulfide										
	Methyltrichlorosilane	Flammable liquid	UN1250	Flammable liquid	None	173.135	Forbidden	10 gallons	1,2	1	
	Methyl trimethylol methane trinitrate	Forbidden									
	Methyl vinyl ketone, inhibited	Flammable liquid	UN1251	Flammable liquid	173.147	173.147	4 ounces	10 gallons	1,2	1	

	Mevinphos	Poison B	NA2783	Poison	None	173.358	Forbidden	1 quart	1,2	5	
	Mevinphos mixture, dry	Poison B	NA2783	Poison	173.377	173.377	Forbidden	200 pounds	1,2	4	
	Mevinphos mixture, liquid	Poison B	NA2783	Poison	173.359	173.359	½ pint	1 quart	1,2	5	
	Mexacarbate	Poison B	NA2757	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Mild detonating fuse, metal clad. See Fuse, mild detonating, metal clad										
	Mine, empty. See 173.55										
	Mine, explosive, with gaseous material. See Explosive mine										
	Mine rescue equipment containing carbon dioxide	Nonflammable gas	NA1956	Nonflammable gas	173.306		150 pounds	300 pounds	1,2	1,2	
	Mining reagent, liquid (*containing 20% or more cresylic acid*)	Corrosive material	NA2022	Corrosive	173.244	173.249a	1 quart	10 gallons	1,2	1,2	
A	Mipafox	ORM-A	UN2783	None	173.505	173.510	No limit	No limit			
	Mixed acid. *See* Nitrating acid										
A	Molybdenum pentachloride	ORM-B	UN2508	None	173.505	173.300	25 pounds	100 pounds			
	Monochloroacetone, stabilized *or* inhibited	Irritating material	UN1695	Irritant	None	173.384	Forbidden	5 gallons	1	1	Stow away from living quarters
	Monochloroacetone (unstabilized)	Forbidden									
	Monochloroethylene. *See* Vinyl chloride										
	Monoethanolamine	Corrosive material	UN2491	Corrosive	173.244	173.245	1 quart	10 gallons	1,2	1,2	
	Monoethylamine	Flammable liquid	UN1036	Flammable liquid	None	173.148	Forbidden	5 pints	1,2	5	Segregation same as for flammable gas
	Monofluorophosphoric acid, anhydrous	Corrosive material	UN1776	Corrosive	None	173.275	Forbidden	1 gallon	1,2	1,2	Keep dry
	Morpholine	Flammable liquid	UN2054	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Morpholine, aqueous, mixture	Flammable liquid	NA2054	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
	Morpholine, aqueous, mixture	Corrosive material	NA1760	Corrosive	173.244	173.245	1 quart	10 gallons	1	4	
	Moth balls. See Naphthalene										
	Motion picture film. See Film										
+	Motor fuel antiknock compound *or* Antiknock compound	Poison B	UN1649	Poison	None	173.354	Forbidden	55 gallons	1	5	If flashpoint less than 141 deg F, segregation same as for flammable liquids
	Motor, internal combustion				173.120						
	Motor vehicle, *etc., including automobile, motorcycle, truck, tractor, and other self-propelled vehicle or equipment powered by internal combustion engine, when offered new or used for transportation and which contain fuel in the engine or fuel tank or the electric storage battery is connected to either terminal of the electrical system*	ORM-C		None	173.120 173.250 173.257 173.306 175.305 176.905				1,2	1,2	
	Muriatic acid. *See* Hydrochloric acid										
	Naled		NA2783	None	None	173.510	No limit	No limit	1,2	1,2	
	Naphtha	Combustible liquid	UN2553	None	173.118a	None	No limit	No limit	1,2	1,2	
	Naphtha	Flammable liquid	UN2553	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,2	1	
AW	Naphthalene *or* Naphthalin	ORM-A	UN1334	None	173.505	173.655	25 pounds	300 pounds	1,2	1,2	Segregation same as for flammable solids
	Naphthalene diozonide	Forbidden									
	Naphtha petroleum. See Petroleum naphtha										
	Naphthenic acid		NA9137	None	None	173.510	No limit	No limit	1,2	1,2	
	Naphthyl amineperchlorate	Forbidden									

§172.101 Hazardous Materials Table

(1)	(2)	(3)	(3A)	(4)	(5) Packaging		(6) Maximum net quantity in one package		(7) Water shipments		
+/A/W	Hazardous materials descriptions and proper shipping names	Hazard class	Identification number	Label(s) required (if not excepted)	(a) Exceptions	(b) Specific requirements	(a) Passenger carrying aircraft or railcar	(b) Cargo only aircraft	(a) Cargo vessel	(b) Passenger vessel	(c) Other requirements
	Natural gas, refrigerated liquid (*with high methane content*) (*cryogenic liquid*)	Flammable gas	UN1972	Flammable gas	None	173.318	Forbidden	Forbidden	1	5	Stow away from living quarters
	Natural gasoline. See Gasoline										
	Neohexane	Flammable liquid	UN1208	Flammable liquid	173.118	173.119	1 quart	10 gallons	1,3	4	
	Neon *or* Neon, compressed	Nonflammable gas	UN1065	Nonflammable gas	173.306	173.302	150 pounds	300 pounds	1,2	1,2	
	Neon, refrigerated liquid (*cryogenic liquid*)	Nonflammable gas	UN1913	Nonflammable gas	173.320	173.316	100 pounds	1,100 pounds	1,3	1,3	
	New explosive or explosive device. See 173.51 and 173.86										
	Nickel ammonium sulfate		NA9138	None	None	173.510	No limit	No limit	1,2	1,2	
	Nickel carbonyl	Flammable liquid	UN1259	Flammable liquid and Poison	None	173.126	Forbidden	Forbidden	1	5	Shade from radiant heat. Segregation same as for flammable liquids. Not permitted on a vessel transporting explosives, except that quantities not exceeding 200 pounds may be transported on such vessels under conditions approved by the Captain of the Port
	Nickel chloride		NA9139	None	None	173.510	No limit	No limit	1,2	1,2	
+	Nickel cyanide, solid	Poison B	UN1653	Poison	173.370		25 pounds	200 pounds	1,2	1,2	Stow away from acids
	Nickel hydroxide		NA9140	None	None	173.510	No limit	No limit	1,2	1,2	
	Nickel nitrate	Oxidizer	UN2725	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Nickel picrate	Forbidden									
	Nickel sulfate		NA9141	None	None	173.510	No limit	No limit	1,2	1,2	
	Nicotine hydrochloride	Poison B	UN1656	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
	Nicotine, liquid	Poison B	UN1654	Poison	None	173.346	Forbidden	55 gallons	1,2	1,2	
	Nicotine salicylate	Poison B	UN1657	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
+	Nicotine sulfate, liquid	Poison B	UN1658	Poison	173.345	173.346	1 quart	55 gallons	1,2	1,2	
+	Nicotine sulfate, solid	Poison B	UN1658	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Nicotine tartrate	Poison B	UN1659	Poison	173.364	173.365	50 pounds	200 pounds	1,2	1,2	
	Nitrated paper (unstable)	Forbidden									
	Nitrate, n.o.s.	Oxidizer	NA1477	Oxidizer	173.153	173.182	25 pounds	100 pounds	1,2	1,2	
	Nitrate of ammonia explosives. See High explosive										
	Nitrates of diazonium compounds	Forbidden									
	Nitrating acid, mixture (with not more than 50% nitric acid)	Corrosive material	UN1796	Corrosive	None	173.267	Forbidden	1 quart	1	5	Stow away from fluorides
	Nitrating acid, mixture (with more than 50% nitric acid)	Oxidizer	UN1796	Oxidizer and Corrosive	None	173.267	Forbidden	1 quart	1	5	Segregation same as for corrosive material. Stow away from fluorides
	Nitrating acid, spent	Corrosive material	NA1826	Corrosive	None	173.248	Forbidden	1 quart	1	5	