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Harmonization With the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions; Final Rule

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

49 CFR Parts 171, 172, 173, 175, 176, 178 and 180

[Docket No. RSPA–2002–13658 (HM–215E)]

RIN 2137–AD41

Harmonization With the United Nations Recommendations, International Maritime Dangerous Goods Code, and International Civil Aviation Organization's Technical Instructions

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Final rule.

SUMMARY: RPSA is amending the Hazardous Materials Regulations (HMR) to maintain alignment with international standards by incorporating various amendments, including changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations and vessel stowage requirements. Because of recent changes to the International Maritime Dangerous Goods Code (IMDG Code), the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), and the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations), these revisions are necessary to facilitate the transport of hazardous materials in international commerce.

DATES: *Effective Date:* The effective date of these amendments is October 1, 2003.

Voluntary Compliance Date: RSPA is authorizing immediate voluntary compliance. However, RSPA may further revise this rule as a result of appeals it may receive for this rule.

Delayed Compliance Date: Unless otherwise specified, compliance with the amendments adopted in this final rule is mandatory October 1, 2004.

Incorporation by Reference Date: The incorporation by reference of the publication adopted in § 171.7 of this final rule has been approved by the Director of the Federal Register as of October 1, 2003.

FOR FURTHER INFORMATION CONTACT: Joan McIntyre, Office of Hazardous Materials Standards, telephone (202) 366–8553, or Shane Kelley, International Standards, telephone (202) 366–0656, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590–0001.

SUPPLEMENTARY INFORMATION:

I. Background

On December 3, 2002, the Research and Special Programs Administration (RSPA, we) published a notice of proposed rulemaking (NPRM) (67 FR 72034) under Docket HM–215E. The NPRM proposed changing the Hazardous Materials Regulations (HMR), 49 CFR parts 171–180, to align it with updates and revisions to the UN Recommendations, the IMDG Code and the ICAO Technical Instructions with respect to hazard communication, classification, and packaging requirements. Our intent was to facilitate the international transportation of hazardous materials by ensuring a basic consistency between the HMR and international standards, while at the same time ensuring the safe transportation of hazardous materials.

On January 8, 2003, we published a final rule under Docket HM–215E (68 FR 1013) authorizing the use of the 2003–2004 edition of the ICAO Technical Instructions, Amendment 31 to the IMDG Code, and the twelfth revised edition of the UN Recommendations beginning January 1, 2003, the effective date of the international standards.

The UN Recommendations are not regulations, but rather are recommendations issued by the UN Committee of Experts on the Transport of Dangerous Goods. These recommendations are amended and updated biennially by the UN Committee of Experts. They serve as the basis for National, regional, and international modal regulations; specifically, the IMDG Code developed by the International Maritime Organization (IMO) Dangerous Goods, Solid Cargoes and Containers Subcommittee, and the ICAO Technical Instructions developed by the ICAO Dangerous Goods Panel. Subject to certain conditions and limitations, § 171.12 of the HMR authorizes domestic transportation of hazardous materials shipments prepared in accordance with the IMDG Code if all or part of the transportation is by vessel. Subject to certain conditions and limitations, § 171.11 of the HMR authorizes the offering, acceptance and transport of hazardous materials by aircraft, and by motor vehicle either before or after being transported by aircraft, provided the shipment is in accordance with the ICAO Technical Instructions.

On December 21, 1990, RSPA published a final rule (Docket HM–181; 55 FR 52402) based on the UN Recommendations, which comprehensively revised the HMR for harmonization with international standards. Since publication of the 1990 final rule, we have issued four additional international harmonization final rules (Dockets HM–215A, 59 FR 67390; HM–215B, 62 FR 24690; HM–215C, 64 FR 10742; and HM–215D, 66 FR 33316). The rules provided additional harmonization with international transportation requirements by more fully aligning the HMR with the corresponding biennial updates of the UN Recommendations, the IMDG Code and the ICAO Technical Instructions.

The large volume of hazardous materials transported in international commerce warrants the harmonization of domestic and international requirements to the greatest extent possible. Harmonization serves to facilitate international transportation, reduces cost to industry, and ensures the safety of people, property and the environment. While the intent of the harmonization rulemakings is to align the HMR with international standards, we review and consider each amendment on its own merit. Each amendment is considered on the basis of the overall impact on transportation safety and the economic implications associated with its adoption into the HMR. Our goal is to harmonize without sacrificing the current HMR level of safety and without imposing undue burdens on the regulated public. In our efforts to continue to align the HMR with international requirements, this final rule makes changes to the HMR based on the twelfth revised edition of the UN Recommendations, Amendment 31 to the IMDG Code, and the 2003–2004 ICAO Technical Instructions, which became effective January 1, 2003. Petitions for rulemaking concerning harmonization with international standards and the facilitation of international transportation are also addressed in this final rule and serve as the basis of certain amendments. Other amendments are based on feedback from the regulated industry, other DOT modal administrations and our initiative. Also included are various editorial clarifications. Unless otherwise stated, the revisions are for harmonization with international standards.

Various commenters raised issues that are beyond the scope of this rulemaking. Such issues will not be addressed in this final rule and must first be addressed in an NPRM to afford industry and the public opportunity to comment.

II. Overview of Changes in this Final Rule

Amendments to the HMR in This final rule include, but are not limited to the following:

- Amendments to the Hazardous Materials Table (HMT) which add, revise or remove certain proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, bulk packaging requirements, passenger and cargo aircraft maximum quantity limitations and vessel stowage provisions.
- Amendments to the List of Marine Pollutants.
- Revisions and additions of special provisions. Included is the addition of a special provision for assignment to aerosol entries setting forth the criteria for classifying aerosols.
- Addition of a requirement to enter the subsidiary hazard class or subsidiary division number on shipping papers.
- Addition of a requirement to indicate the number and types of packagings on shipping papers.
- Addition of an alternative basic description sequence on shipping papers.
- Revision of marking requirements for limited quantities.
- Addition of an air eligibility marking requirement.
- Revision of requirements in § 173.27 for packagings intended for transportation by aircraft, including revision of requirements for use of absorbent material for such packagings.
- Revision to the classification of air bag modules, air bag inflators and seat-belt pretensioners from Division 2.2 to Class 9.
- Revision of the non-liquefied and liquefied compressed gases descriptions, and the addition of high pressure and low pressure liquefied gases categories.
- Revisions and additions to the Self-Reactive Materials Table.
- Revisions and additions to the Organic Peroxide Table.
- Revision of the net weight restrictions for explosives in freight containers exceeding 20 ft (6 m) in length.

III. Summary of Regulatory Changes by Section

Part 171

Section 171.6. We are revising the table in paragraph (b)(2) to incorporate a new information collection, OMB No. 2137–0613, ''Subsidiary Hazard Class and Number/Type of Packagings,'' and the affected sections, §§ 172.202 and 172.203.

Section 171.7. We are adding Regulation 19 of an IMO standard titled ''International Convention for the Safety of Life at Sea,'' 1974, as amended, Chapter II–2. Regulation 19 is incorporated into a new paragraph (f) in § 176.63 to address hatchless container ship requirements.

Section 171.8. In the definition for ''Large packaging,'' we are adding the words ''Chapter 6.6'' to let readers know the location in the UN Recommendations for the construction, testing and marking of such packagings.

Section 171.11. We are revising paragraphs (c), (d)(5) and (d)(17) to address certain limitations for the use of the ICAO Technical Instructions.

In paragraph (c), for hazardous materials being transported in accordance with the ICAO Technical Instructions, the restrictions for the use of the Instructions are revised to include hazardous materials that are forbidden by passenger and cargo aircraft, as designated in Columns (9A) and (9B) of the § 172.101 HMT. Prior to this revision, the paragraph restricted materials that are forbidden according to § 173.21 and Column (3) of the HMT only.

In paragraph (d)(5), we are removing the wording ''except for Division 2.2'' relating to shipping paper requirements for air bag inflators, air bag modules and seat-belt pretensioners. This amendment is consistent with the removal of the Division 2.2 air bag inflator, air bag module and seat-belt pretensioner entry in the HMT (see § 172.101).

Paragraph (d)(17) is revised to clarify the current requirement that, in addition to organic peroxides, self-reactive substances not specifically identified by name in § 173.224(b) also must be approved by the Associate Administrator in accordance with the requirements in § 173.124(a)(2)(iii).

Section 171.12. We are revising paragraphs (b)(3), (b)(19), and (b)(20).

In paragraph (b)(3), we are removing certain viscous flammable liquids as an example of a material designated as a hazardous material subject to the HMR, but not subject to the IMDG Code. The IMO removed the exception in Amendment 31 to the IMDG Code.

In paragraph (b)(19), we are removing the wording ''except for Division 2.2'' relating to shipping paper requirements for air bag inflators, air bag modules and seat-belt pretensioners. This revision is consistent with the removal of the Division 2.2 air bag inflator, air bag module and seat-belt pretensioner entry in the HMT (see § 172.101).

In paragraph (b)(20), we are clarifying the current requirement that, in addition to organic peroxides, self-reactive substances not specifically identified by name in § 173.224(b) must also be approved by the Associate Administrator in accordance with the requirements in § 173.124(a)(2)(iii).

For the readers' information, recently adopted amendments to the International Convention for the Safety of Life at Sea (SOLAS), 1974, as amended, will require mandatory of the use of the IMDG Code effective January 1, 2004. This issue will be addressed under a separate rulemaking.

Section 171.12a. We are revising paragraph (b)(18) to clarify the existing requirement that, in addition to organic peroxides, self-reactive substances not specifically identified by name in § 173.224(b) also must be approved by the Associate Administrator in accordance with the requirements in § 173.124(a)(2)(iii).

Section 171.14. We are revising paragraphs (d), (d)(1), (d)(2), (d)(4), and (d)(5). We received several comments concerning the proposed transitional provisions. Several commenters requested that we implement an overall two-year transition period from the October 1, 2003 effective date, and several commenters requested an overall three-year transition period. In the NPRM, we proposed a mandatory compliance date of October 1, 2004.

While we do not agree that all amendments require an additional extended compliance date, we do agree that certain amendments warrant the additional time. We are, therefore, authorizing an October 1, 2007 mandatory compliance date for the new requirement in § 172.202(a)(5) to include the number and types of packagings on shipping papers. This requirement was identified by commenters as requiring additional time to offset any associated burden. Additionally, we are adopting an October 1, 2007 transition date for modifications to package markings that will change as a result of changes to certain proper shipping names. We are also adopting an October 1, 2005 compliance date for use of proper shipping names that did not identify specific isomers by numbers or letters preceding the chemical name. Finally, we are authorizing an October 1, 2005 mandatory compliance date for the requirement to include the subsidiary hazard class or division number on shipping papers.

We are revising paragraphs (d) and (d)(1) to authorize an October 1, 2004 implementation date for the amendments in this final rule.

We are revising paragraph (d)(2) to authorize certain intermixing of old and new requirements until October 1, 2004.

We are revising paragraph (d)(4) to allow until June 1, 2010, DOT

Specification 51 portable tanks to conform with the T Codes (Special Provisions) in effect on September 30, 2001.

We are revising paragraph (d)(5) to allow proper shipping names that included the word ''inhibited'' prior to the June 21, 2001 final rule, to continue to be shown on packagings and shipping papers in place of the word ''stabilized'' until October 1, 2007. Additionally, the October 1, 2007 date applies to the proper shipping names in this final rule that are revised by removing the word ''compressed'' (see § 172.101, HMT).

Paragraph (d)(6) authorizes use of the shipping paper requirement to include the total quantity of packages on shipping papers until October 1, 2007.

Paragraph (d)(7) authorizes use of the non-mandatory provision to include the subsidiary hazard class or division number on shipping papers until October 1, 2005.

Paragraph (d)(8) authorizes the marking of certain other proper shipping names on packagings until October 1, 2005. The proper shipping names are those that are revised to include the position identifiers of the substituents, such as 2-Ethylbutyl acetate (see § 172.101, HMT preamble discussion).

Part 172

Section 172.101. In the regulatory text preceding the Hazardous Materials Table, the following changes are made:

Paragraph (c)(15) is revised by removing the words ''of inorganic substances.'' Prior to this revision, unless a hydrate was specifically listed in the HMT, only hydrates of inorganic substances were authorized to be identified using the proper shipping name for the equivalent anhydrous substance, provided the hydrates met the same hazard class, division, subsidiary risk(s) and packaging group. With the removal of the phrase ''of inorganic substances,'' paragraph (c)(15) applies to all hydrates.

Section 172.101 Hazardous Materials Table (HMT). We are making various amendments to the HMT. Readers should review all changes for a complete understanding of the Table amendments. For purposes of the Government Printing Office's typesetting procedures, changes to the HMT will appear under three sections of the Table, ''remove,'' ''add'' and ''revise.'' Certain entries in the HMT, such as those with revisions to the proper shipping names, will appear as a ''remove'' and ''add.'' Amendments to the HMT for the purpose of harmonizing with international standards, unless otherwise stated, include, but are not limited to the following:

• ''*Accumulators, pressurized, pneumatic or hydraulic (containing non-flammable gas), see* Articles, pressurized, pneumatic *or* hydraulic (*containing non-flammable gas*)'' is added as a ''see'' entry into the HMT to aid the reader in locating the updated entry. This action is based on feedback we received from users of the HMR after we removed the domestic entry (''Accumulators, pressurized, pneumatic,'' UN1956), as well as certain other domestic entries from the HMT in a final rule, HM–215D (66 FR 33316), published June 21, 2001. The entries were removed because we determined that they were no longer necessary considering the HMT already includes equally appropriate international entries. (Also see § 173.306(f) for a related editorial revision.)

• ''Air bag inflators, compressed gas *or* Air bag modules, compressed gas *or* Seat-belt pretensioners, compressed gas,'' Division 2.2, UN3353 is removed. All air bag inflators, air bag modules and seat-belt pretensioners currently classified as Division 2.2 may be reclassified as Class 9. We are also incorporating into the HMR a provision to allow this reclassification without further testing (see § 173.166). In line with the removal of this entry, Special Provision 133 is also removed. We are aware that removal of the UN3353 entry will require repackaging, remarking and relabeling of all compressed gas air bag assemblies. We received a comment from the North American Automotive Hazmat Action Committee (NAAHAC) expressing this concern; however, the NAAHAC stated that the proposed mandatory compliance date of October 1, 2004, would be sufficient time to implement the new requirements. We also believe that the mandatory compliance date of October 1, 2004, and the transitional provisions in § 171.14(d)(2), authorizing certain intermixing of old and new requirements, will offer sufficient time and flexibility to implement the new requirements and reduce the costs of meeting this requirement.

• ''Air bag inflators, *pyrotechnic* or Air bag modules, *pyrotechnic or* Seat-belt pretensioner, *pyrotechnic*'' UN0503, Division 1.4G, is amended by removing the word ''pyrotechnic'' from the proper shipping names in Column (2), revising Columns (8A) and (8C) to read ''None,'' revising Column (8B) to read ''§ 173.62'' (also see § 173.62), adding new Special Provision 161 (see § 172.102), and revising the vessel stowage columns (10A) and (10B). We are adding Special Provision 161 because we believe that a more appropriate name is ''Articles, pyrotechnic *for technical purposes,*'' UN0431. We believe that an article meeting the criteria for Division 1.4G should be considered a pyrotechnic article and not an air bag. We received a comment from NAAHAC supporting this revision and stating that if an inflator does not pass the UN Recommendations' Series 6 test criteria, it is considered a pyrotechnic article and not an airbag. (Also see Special Provision 161.)

• ''Air bag inflators, *pyrotechnic* or Air bag modules, *pyrotechnic or* Seat-belt pretensioner, *pyrotechnic,*'' UN3268, Class 9, is amended by removing the descriptive word ''pyrotechnic'' and adding new Special Provision 160 (see § 172.102). NAAHAC requested that we retain the word ''pyrotechnic'' as a descriptive word in the shipping name to provide time for depletion of existing inventories. Although we are removing the word ''pyrotechnic'' in this rulemaking, we believe that extending the mandatory compliance date from October 1, 2004, as proposed in the NPRM, to October 1, 2005, as adopted in this final rule (see § 173.166(d)(5)), will provide the necessary time requested by the commenters.

• ''Ammonium nitrate, *with not more than 0.2% combustible substances, including any organic substance calculated as carbon to the exclusion of any other added substance*,'' UN1942 is amended by editorially correcting the italicized portion of the proper shipping name by adding the word ''total'' after ''0.2%.''

• ''Ammonium nitrate fertilizers,'' UN2071, and ''Ammonium nitrate fertilizers,'' UN2067 are amended by removing the italicized portion of the proper shipping names, adding new Special Provision 150 to the UN2067 entry, and revising Special Provision 132 which applies to the UN2071 entry (see § 172.102 for Special Provision amendments).

• ''Ammonium nitrate fertilizers,'' NA2072 and ''Ammonium nitrate mixed fertilizers,'' NA2069 are removed. We believe that the international entry ''Ammonium nitrate fertilizers,'' UN2067 can be used in place of the domestic entries, which do not provide any additional exceptions.

• A new entry, ''Ammonium nitrate emulsion *or* Ammonium nitrate suspension *or* Ammonium nitrate gel, *intermediate for blasting explosives*,'' UN3375 (also see § 172.102, Special Provisions 52 and 147) is added.

• For the entry ''Calcium hypochlorite, hydrated *or* Calcium hypochlorite, hydrated mixtures, *with*

not less than 5.5 percent but not more than 10 percent water,'' UN2880, the wording ''*not more than 10 percent water*'' is revised to read ''*not more than 16 percent water.*''

• Four proper shipping names are revised by adding the position identifiers of the substituents. The proper shipping names are ''Diethylaminopropylamine,'' position identifier ''3'; ''Dimethylcyclohexylamine,'' position identifiers ''N,N'; ''Ethylbutyl acetate,'' position identifier ''2''; ''Propyl chloride'' which is replaced by ''1-Chloropropane,'' and ''Tetrachloroethane,'' position identifiers ''1,1,2,2,''. Also, see § 171.14(d)(6) for the continued use provision of these proper shipping names.

• The entry ''Hydrazine hydrate *or* Hydrazine aqueous solutions, *with not less than 37 percent but not more than 64 percent hydrazine, by mass*,'' UN2030 and ''Hydrazine, anhydrous *or* Hydrazine aqueous solutions *with more than 64 percent hydrazine, by mass*,'' UN2029 are removed and ''Hydrazine aqueous solution, *with more than 37% hydrazine, by mass*,'' UN2030 and ''Hydrazine, anhydrous,'' UN2029'' are added.

• Eleven entries are revised by removing the qualifying word ''compressed.'' This action is consistent with the revisions to proper shipping names for compressed and liquefied gases that were incorporated into the Twelfth Edition of the UN Recommendations and which we are adopting into the HMR (see § 173.115 for additional discussion). The eleven entries are ''Boron trifluoride, compressed,'' UN1008; ''Carbonyl fluoride, compressed,'' UN2417; ''Diborane, compressed,'' UN1911; ''Ethylene, compressed,'' UN1962; ''Hexafluoroethane, compressed *or* Refrigerant gas R 116,'' UN2193; ''Nitrogen trifluoride, compressed,'' UN2451; ''Phosphorus pentafluoride, compressed,'' UN2198; ''Silane, compressed,'' UN2203; ''Silicon tetrafluoride, compressed,'' UN1859; ''Tetrafluoromethane, compressed *or* Refrigerant gas R 14,'' UN1982; and ''Xenon, compressed,'' UN2036. Also, see § 171.14(d)(6) for the continued use provision of these proper shipping names.

• For the proper shipping name ''Lighters *or* Lighter refills *cigarettes, containing flammable gas*,'' UN1057, the word ''cigarettes'' is removed.

• The proper shipping name ''Lithium hydroxide, monohydrate *or* Lithium hydroxide, solid,'' UN2680 is revised to read ''Lithium hydroxide.''

• For the entry ''Medicine, liquid, toxic, n.o.s.,'' UN1851, we are adding Special Provision 36. The special provision, which limits the maximum net quantity per package to 5 L (1 gal) for liquids and 5 kg (11 lbs) for solids, is currently assigned to ''Medicine, liquid, flammable, toxic, n.o.s.,'' UN3248 and ''Medicine, solid, toxic, n.o.s.,'' UN3249.

• For the entry ''Motor fuel anti-knock mixtures,'' UN1649, we are removing the subsidiary risk hazard from the labeling requirement, and adding new Special Provision 151. This action is based on a petition for rulemaking (P–1420) we received (see discussion under § 172.102).

• The proper shipping name ''Uranium nitrate hexahydrate solution,'' UN2980 is corrected by replacing the word ''Uranium'' with ''Uranyl.'' The typographical error occurred in the April 3, 2002 document published in the **Federal Register** (67 FR 15736).

• The entry ''Xylidines, solution,'' UN1711 is revised to read ''Xylidines, liquid.''

• In addition to those entries identified above, we are adding the following new entries: ''Chlorosilanes, toxic, corrosive, n.o.s.,'' UN3361; ''Chlorosilanes, toxic, corrosive, flammable, n.o.s.,'' UN3362; ''Ethylene glycol diethyl ether,'' UN1153; ''Fibers, animal *or* fibers, vegetable *burnt, wet or damp*,'' UN1372; ''Fibers, vegetable, dry,'' UN3360; ''4-Nitrophenylhydrazine, *with not less than 30% water, by mass*,'' UN3376; ''Organometallic compound, solid, water-reactive, flammable, n.o.s.,'' UN3372; ''Rags, oily,'' UN1856; ''Rubber scrap *or* Rubber shoddy, *powdered or granulated, not exceeding 840 microns and rubber content exceeding 45%*,'' UN1345; ''Sodium dinitro-o-cresolate, wetted, *with not less than 10% water by mass*,'' UN3369; ''Textile waste, wet,'' UN1857; ''Trinitrobenzene, wetted, *with not less than 10% water by mass*,'' UN3367; ''Trinitrobenzoic acid, wetted, *with not less than 10% water by mass*,'' UN3368; ''Trinitrochlorobenzene (picryl chloride), wetted, *with not less than 10% water by mass*,'' UN3365; ''Trinitrophenol (picric acid), wetted, *with not less than 10% water by mass*,'' UN3364; ''Trinitrotoluene (TNT), wetted, *with not less than 10% water by mass*,'' UN3366 and ''Wool waste, wet,'' UN1387.

• Various entries are amended by revising the vessel stowage columns (10A) and/or (10B). The entries include the following: the five ''Aerosols,'' UN1950 entries; ''Ammunition, smoke *with or without burster, expelling charge or propelling charge*,'' UN0303; ''Battery fluid, alkali,'' UN2797; ''Methacrylic acid, stabilized,'' UN2531; ''Sulfur, molten,'' UN2448; and ''Urea, nitrate, *wetted with not less than 20 percent water, by mass*,'' UN1357.

Also, see § 172.102 for additional HMT amendments.

Appendix B to § 172.101. In Appendix B to § 172.101, List of Marine Pollutants, we are revising paragraphs ''4'' and ''5'' to update the location in the IMDG Code for the ''Guidelines for the Identification of Harmful Substances in Packaged Form.'' This update is based on the IMDG Code's change in location from the General Introduction to Chapter 2.10.

In addition, we are removing the entries ''Alkylphenols, liquid, n.o.s. *(including C2–C12 homologues)*,'' ''Alkylphenols, solid, n.o.s. *(including C2–C12 homologues)*,'' ''Chlorophenols, liquid,'' and ''Chlorophenols, solid,'' from the List of Marine Pollutants. We are revising the entry ''Alkylbenzenesulphonates, branched and straight chain'' by adding a qualifying phrase to clarify that C11-C13 straight chain or branched chain homologues are not regulated as marine pollutants. Finally, we are adding the entry ''Decyl acrylate.''

Section 172.102. We are amending § 172.102, Special Provisions, as follows:

• Special Provisions 7 and 10 are removed. These special provisions are assigned to the entries ''Ammonium nitrate mixed fertilizers,'' NA2069 and ''Ammonium nitrate fertilizers,'' NA2072, respectively, which we are removing (see § 172.101, HMT).

• Special Provision 15, which is assigned to ''Chemical kits,'' UN3316 and ''First aid kits,'' UN3316, is revised for consistency with packagings authorized for limited quantity exceptions. We are also relocating the authorized packagings to § 173.161. Revised Special Provision 15 specifies (1) which chemical and first aid kits are properly described by the entries; (2) that materials forbidden by air may not be included in the kits when they are transported by air; and (3) that kits carried on board transport vehicles for first aid or operating purposes are not subject to the HMR.

• Special Provision 30 is revised to include an exception from the placarding requirements for ''Sulfur, molten'' UN2448 and ''Sulfur,'' UN1350. Prior to this change, the domestic entries ''Sulfur, molten,'' NA2448 and ''Sulfur,'' NA1350 did not require placards because both entries are Class 9 materials and meet the placarding exceptions for the hazard

class in § 172.504(f)(9). Revised Special Provision 30 provides the same placarding exceptions for the international entries provided the bulk packagings are marked in accordance with § 172.325.

• Special Provision 52 is editorially revised by removing the wording specific to fertilizers. The special provision, which is currently applied to ''Ammonium nitrate fertilizers,'' UN2067, is added to the new entry ''Ammonium nitrate emulsion *or* Ammonium nitrate suspension *or* Ammonium nitrate gel, *intermediate for blasting explosives,*'' UN3375. The special provision states that a material using the assigned entries may not exhibit explosive properties of Class 1 (explosive) when tested in accordance with the UN Manual of Tests and Criteria, Part I, Test Series 1 and 2.

• Special Provision 130, which excepts dry batteries from the HMR, is revised by adding a requirement that such batteries must be securely packed and protected against short circuits and by clarifying that dry batteries specifically named in the § 172.101 Table are not eligible for the exception.

• Special Provision 132 is revised to add the criteria for use of this special provision. The special provision is added to the revised entry ''Ammonium nitrate,'' UN2071, Class 9.

• Special Provision 133 is removed. This special provision was assigned to the entry ''Air bag inflators, compressed gas *or* Air bag modules, compressed gas *or* Seat-belt pretensioners, compressed gas'' UN3353, Division 2.2, which is removed from the HMT by this final rule (see discussion under § 172.101, HMT.)

• Existing Special Provision 134 is revised to include vehicles powered by lithium batteries. This revision is based on comments from Argonne National Laboratories and the Conference on Safe Transportation of Hazardous Articles.

• New Special Provision 145 is added to the existing entry ''Hydrogen peroxide and peroxyacetic acids mixtures, stabilized, *with acids, water and not more than 5 percent peroxyacetic acid,*'' UN3149. The special provision describes the formulations for which this entry apply.

• New Special Provision 146 is added to the entries ''Environmentally hazardous substances, liquid, n.o.s.,'' UN3082 and ''Environmentally hazardous substances, solid, n.o.s.,'' UN3077 to clarify that the entries may be used to describe a material that poses a hazard to the environment if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination, even if it is not an environmentally hazardous substance under the HMR.

• New Special Provision 147 is added to the new entry, ''Ammonium nitrate emulsion *or* Suspension *or* Gel, *intermediate for blasting explosives,*'' UN3375. The special provision describes the composition of the material for which the use of the entry is authorized and prohibits the material from being classified and transported unless approved by the Associate Administrator.

• New Special Provision 149 is added to the Packing Group II entries for 13 existing proper shipping names. The special provision allows the maximum net capacity for inner packagings to be increased to no more than 5 L (1.3 gal) when the material is transported as a limited quantity. The National Paint and Coatings Association (NPCA) supports the increase for inner packagings, stating that the potential for errors will be greatly reduced by allowing the same quantity limits for PG II and PG III materials. However, NPCA, along with the Association of Hazmat Shippers and PPG Industries, requests that we clarify that the special provision is applicable to consumer commodities as well as limited quantities. We revised the special provision accordingly. The 13 entries are: ''Adhesives, *containing a flammable liquid,*'' UN1133; ''Coating solution *(includes surface treatments or coatings used for industrial or other purposes such as vehicle undercoating, drum or barrel lining),*'' UN1139; ''Extracts, aromatic, liquid,'' UN1169; ''Extracts, flavoring, liquid,'' UN1197; ''Printing ink, *flammable or* Printing ink related material *(including printing ink thinning or reducing compound), flammable,*'' UN1210; ''Paint *including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base,*'' UN1263; ''Paint related material *including paint thinning, drying, removing, or reducing compound,*'' UN1263; ''Perfumery products *with flammable solvents,*'' UN1266; ''Rubber solution,'' UN1287; ''Wood preservatives, liquid,'' UN1306; ''Resin solution, *flammable,*'' UN1866; ''Tars, liquid *including road asphalt and oils, bitumen and cut backs,*'' UN1999; and ''Polyester resin kit,'' UN3269 for Packing Group II resin kits as specified in Special Provision 40.

• New Special Provision 150 is added to the entry ''Ammonium nitrate based fertilizer,'' UN2067 to authorize the use of the entry for uniform mixtures containing ammonium nitrate as the main ingredient within certain composition limits.

• New Special Provision 151 is added to the new entry ''Hydrazine aqueous solution, *with more than 37% hydrazine, by mass*'' UN2030, Packing Group I and to the existing entry ''Motor fuel anti-knock mixtures,'' UN1649. This special provision requires a packaging containing a material meeting the definition of a flammable liquid to display a FLAMMABLE LIQUID label, and it requires a Class 3 subsidiary hazard to be shown on shipping papers.

With regard to the entry ''Motor fuel anti-knock mixtures,'' UN1649, as discussed in the NPRM, we received a petition for rulemaking (P–1420) requesting that we remove the flammable subsidiary risk for this entry. The petitioner stated that the international standards do not assign the entry a flammable subsidiary risk and that the inconsistency with the HMR causes a regulatory compliance burden when transporting the material internationally. The petitioner stated that removing the subsidiary risk is additionally justified because motor fuel anti-knock mixtures containing tetramethyl lead, with fire points greater than 54 °C (129.2 °F), are no longer manufactured or transported. Although the UN Recommendations, the ICAO Technical Instructions and the IMDG Code do not assign a flammable subsidiary risk to the entry, all three standards assign a special provision stating that mixtures with a flashpoint of less than 60.5 °C (141 °F) must bear a flammable liquid subsidiary risk label. We are removing the flammable subsidiary risk from the label requirements in Column (6) of the HMT for ''Motor fuel anti-knock mixtures,'' UN1649 and adding a new Special Provision 151 to require a FLAMMABLE LIQUID subsidiary label only when the mixtures have a flashpoint of less than 60.5 °C (140.9 °F). Also, see preamble text under the § 172.101 Table changes.

• New Special Provision 153 is added to the five ''Aerosols,'' UN1950 entries to provide the criteria for classifying aerosols.

• New Special Provision 155 is added to two entries, ''Fish meal, stabilized *or* Fish scrap, stabilized,'' UN2216 and ''Fish meal, unstabilized *or* Fish scrap, unstabilized,'' UN1374. The special provision specifies that the fish scrap or fish meal may not be transported if the temperature of fish scrap at the time of loading either exceeds 35 °C (95 °F), or exceeds 5 °C (41 °F) above the ambient temperature, whichever is higher. Also see § 173.218 for additional discussion.

• New Special Provision 156 is added to three entries, ''Blue asbestos (*Crocidolite*) or Brown asbestos (*amosite, mysorite*),'' UN2212, ''White

asbestos (*chrysotile, actinolite, anthophyllite, tremolite*),'' UN2590, and ''Asbestos,'' NA2212. The special provision provides an exception from the HMR for certain asbestos. Prior to this change, the exception was located in § 173.216(b) and excepted asbestos immersed or fixed in a natural or artificial binder material and asbestos contained in manufactured products. Before the development of the HM–215E NPRM, we received comments that § 173.216 was not an appropriate location for this exception because it is referenced in the non-bulk column of the HMT, leading readers to believe that the exception applies to non-bulk packagings only. To clarify that this exception applies to both non-bulk and bulk packagings, we are moving the exception from § 173.216(b) to new Special Provision 156.

• New Special Provision 157 is added to the entries ''Vehicle, flammable gas powered,'' and ''Vehicle, flammable liquid powered,'' each of which is assigned to UN3166. The new special provision specifies that the entries include hybrid electric vehicles powered by both internal combustion engines and wet, sodium or lithium batteries. NAAHAC agrees with the adoption of Special Provision 157, and requests that we clarify whether we are addressing all wet batteries. We do intend for the entries ''Vehicle, flammable gas powered'' and ''Vehicle, flammable liquid powered,'' and Special Provision 157 to apply to all wet batteries. While we are not aware of any hybrid vehicles that utilize wet batteries as a source of propulsion power, we included the reference in order to provide flexibility to encompass all wet batteries contained in the vehicle.

• New Special Provision 159 is added to the entry ''5-tert-Butyl-2,4,6-trinitro-m-xylene *or* Musk Xylene,'' UN2956. The special provision requires this material to be protected from direct sunshine and kept in a cool, well-ventilated place away from sources of heat.

• New Special Provision 160 is added to the entry ''Air bag inflators, *or* Air bag modules, *or* Seat-belt pretensioner,'' UN3268, Class 9. The special provision includes the requirement that air bag inflators and modules must be tested in accordance with Test series 6 (c) of Part I of the UN Manual of Tests and Criteria, and also includes an exception from testing air bag modules that contain an inflator that has been previously approved for transportation. We received a comment from NAAHAC supporting adoption of this special provision.

• New Special Provision 161 is added to the entry ''Air bag inflators, *pyrotechnic or* Air bag modules, *pyrotechnic or* Seat-belt pretensioners, *pyrotechnic,*'' UN0503, Division 1.4G. One commenter stated that the addition of this special provision poses an unnecessary burden for international shippers by requiring the use of the proper shipping name, ''Articles, pyrotechnic *for technical purposes,*'' UN0431. Special Provision 161 applies only to domestic shipments. Shipments offered and transported in accordance with the provisions of §§ 171.11 and 171.12 are not subject to this special provision. The special provision specifies that the UN0503 entry may not be used for domestic shipments and that the more appropriate description is ''Articles, pyrotechnic *for technical purposes,*'' UN0431. We believe that describing articles meeting the Class 1.4G criteria as air bags is misleading and may cause confusion for emergency responders. The wording ''or seat belt pretensioners'' was inadvertently omitted from the NPRM's regulatory text and is added in this final rule. Also, see § 172.102, HMT, which includes the amendment to remove the italicized word ''pyrotechnic'' from the UN0503 entry.

• New Special Provision 162 is added to eight new entries and two existing entries. The Special Provision authorizes the material to be transported under the provisions of Division 4.1, only if it is packed so that at no time during transport will the percentage of diluent fall below the percentage that is specified in the proper shipping name. The new entries are ''4-Nitrophenylhydrazine, *with not less than 30% water, by mass,*'' UN3376; ''Sodium dinitro-o-cresolate, wetted, *with not less than 10% water by mass,*'' UN3369; ''Trinitrobenzene, wetted, *with not less than 10% water by mass,*'' UN3367; ''Trinitrobenzoic acid, wetted, with not less than 10% water by mass, UN3368; ''Trinitrochlorobenzene (picryl chloride), wetted, *with not less than 10% water by mass,*'' UN3365; ''Trinitrophenol (picric acid), wetted, with not less than 10% water by mass,'' UN3364; ''Trinitrotoluene (TNT), wetted, *with not less than 10% water by mass,*'' UN3366; and ''Urea nitrate, wetted, *with not less than 10% water by mass,*'' UN3370. The two existing entries are ''Barium azide, wetted *with not less than 50 percent water, by mass,*'' UN1571 and ''Dipicryl sulfide, wetted *with not less than 10 percent water, by mass,*'' UN2852.

• New Special Provisions A54 and A55 are added to address certain requirements for the transportation of lithium batteries by aircraft. Special Provision A54 provides for an approval provision that authorizes lithium batteries and lithium batteries contained in equipment or packed with equipment to exceed the quantity limits as specified in Column (9B) of the HMT when transported by cargo aircraft, if approved by the Associate Administrator. Based on a comment we received from the Portable Rechargeable Battery Association (PRBA) stating that we did not take into account large lithium batteries contained in equipment, we are increasing the quantity in the HMT for lithium batteries contained in equipment from 5 kg to 35 kg for consistency with the maximum quantity per package specified for lithium batteries packed with equipment. Additional comments submitted by PRBA are beyond the scope of this rulemaking. Special Provision A55 provides for an approval provision to authorize prototype batteries to be transported by cargo aircraft, if approved by the Associate Administrator. We are assigning Special Provisions A54 and A55 to the entries ''Lithium battery,'' UN3090, ''Lithium batteries, contained in equipment,'' UN3091 and ''Lithium batteries packed with equipment,'' UN3091.

• New Special Provision A56 is added to address the air transport of radioactive material with subsidiary hazards of Division 4.2, PG I, and Divisions 2.1 or 2.3. Division 4.2, PG I subsidiary hazard materials are authorized for transportation by aircraft in Type B packagings only. Materials with a 2.1 subsidiary hazard are prohibited from transport aboard passenger aircraft. The special provision is in alignment with the ICAO Technical Instruction's Special Provision A78, with regard to radioactive materials with Division 2.1 subsidiary hazard but not the Division 4.2, PG I packaging requirement or the Division 2.3 subsidiary hazard approval provision. New Special Provision A56 includes Division 4.2, PG I because we believe it was inadvertently omitted in ICAO's Special Provision A78, and we understand that steps are being taken to address the matter with the ICAO Dangerous Goods Panel. See the § 172.101 HMT in the regulatory text of this rule for specific entries.

• Special Provision IB3 is revised by excepting ''Ammonia solutions, *relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia*,'' UN2672 from the Special Provision's ''Additional Requirement'' that authorizes liquids with a vapor pressure less than or equal to 110 kPa

at 50 °C (1.1 bar at 122 °F), or 130 kPa at 55 °C (1.3 bar at 131 °F). New Special Provision IP8 is also added to the UN2672 entry.

• Special Provision IB52 (Table 2) is revised by adding additional packaging authorizations for certain entries and correcting various typographical errors. The entry ''Dicumyl peroxide,'' UN3110 is corrected by adding ''2000'' as the maximum quantity in liters. In addition, we are moving the approval provision for formulations not covered in Special Provision IB52 to § 173.225(e)(5). Section 173.225(e) currently contains an approval provision for portable tanks, and we believe this paragraph is a more appropriate location for the IB52 approval provision.

• New Special Provision IP8 (Table 3) is added to the existing entry ''Ammonia solutions, *relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent ammonia,*'' UN2672 (see Special Provision IB3). We received a comment from the Industrial Packaging Alliance of North America supporting this addition. The special provision authorizes ammonia solutions to be transported in rigid or composite plastic intermediate bulk containers (IBCs) (31H1, 31H2 and 31HZ1), if the rigid plastic and composite IBCs have successfully passed, without leakage or permanent deformation, the hydrostatic test specified in § 178.814 at a test pressure that is not less than 1.5 times the vapor pressure of the contents at 55 °C (131 °F).

• New Special Provision N83 is added to the new entry ''Urea nitrate, wetted, *with not less than 10% water by mass,*'' UN3370. This special provision limits the quantity of this material to no more than 11.5 kg (25.4 lbs) per package.

• New Special Provision N84 is added to six new entries and one existing entry. The special provision limits the quantity per package to no more than 500 g (1.1 lbs.). The six new entries are: ''Trinitrophenol (picric acid), wetted, *with not less than 10% water by mass,*'' UN3364; Trinitrochlorobenzene (picryl chloride), wetted, *with not less than 10% water by mass,*'' UN3365; ''Trinitrotoluene (TNT), wetted *with not less than 10% water by mass,*'' UN3366; ''Trinitrobenzene, wetted, *with not less than 10% water by mass,*'' UN3367; ''Trinitrobenzoic acid, wetted, *with not less than 10% water by mass,*'' UN3368; and Sodium Dinitro-o-cresolate, wetted, *with not less than 10% water by mass,*'' UN3369. The existing entry is Dipicryl sulfide, wetted *with not less than 10 percent water, by mass,*'' UN2852.

• New Special Provision N85 is added to two existing entries, ''Isosorbide dinitrate mixture *with not less than 60 percent lactose, mannose, starch or calcium hydrogen phosphate,*'' UN2907 and ''Pentaerythrite tetranitrate mixture, desensitized, solid, n.o.s. *with more than 10 percent but not more than 20 percent PETN, by mass,*'' UN3344. The special provision prohibits the material from being transported in packagings conforming to the requirements of Part 178 of the HMR at the Packing Group I performance level. This action addresses over-confinement hazards associated with these materials by prohibiting the use of packagings meeting the Packing Group I performance criteria.

• Special Provision T23 is revised to correct typographical errors for the entries ''tert-Butyl peroxyacetate, not more than 32% in diluent type B'' and ''tert-Butyl peroxypivalate, not more than 27% in diluent type B.'' The word ''tyupe'' is corrected to read ''type'' and the control temperature, ''–5 °C,'' is corrected to read ''+5 °C.''

• Special Provision TP3 is editorially revised for clarity.

Section 172.202. We are revising paragraphs (a)(2), (a)(5) and (b) as discussed below.

Requirement To Include the Subsidiary Hazard on Shipping Papers

In paragraph (a)(2), we are requiring the subsidiary hazard class(es) or subsidiary division number(s) to be entered in parentheses following the primary hazard class or division number on shipping papers. Prior to this amendment, the requirement only applied to transportation by vessel. As discussed in the NPRM, this amendment responds to four petitions for rulemaking, P–1363, P–1398, P–1402 and P–1418. One petitioner (P–1363) stated that the lack of such a requirement poses problems for motor carriers concerning segregation, separation and placarding requirements and poses a safety hazard. The petitioner pointed out that when the hazardous materials being transported include a subsidiary hazard such as ''dangerous when wet'' or a subsidiary hazard requiring more stringent requirements than the primary hazard, there is no indication of the subsidiary hazards on the shipping papers and no indication of the subsidiary risks on placards. The petitioner stated that when motor vehicles are being loaded at a dock, labels are not enough to alert hazardous materials employees loading the vehicles or emergency responders of the subsidiary risks of materials contained in the vehicle.

Two petitions (P–1398 and P–1402) were specific to Division 4.3 materials. The petitioners requested that we require the shipping paper to contain the words ''dangerous when wet'' following the basic description for hazardous materials classed as Division 4.3 or having a Division 4.3 subsidiary hazard. The petitioners stated that the additional information would aid emergency responders by more clearly identifying the hazard.

We agree with the petitioners and we are adding a requirement to identify all subsidiary risks of a hazardous material on the shipping paper.

We do not agree with the petitioner's (P–1363) suggestion to provide an exception from the revised requirement to include the subsidiary hazard on shipping papers when the subsidiary hazard is identified in the proper shipping name (for example, ''Flammable liquid, toxic, n.o.s.''). This suggested approach is inconsistent with the UN Recommendations and would result in the addition of a domestic exception that would not enhance hazard communication.

Some commenters supported the requirement to indicate the subsidiary hazard in the basic shipping description; however, other commenters asked that we provide a delayed implementation date in order to minimize associated costs resulting from changes that will need to be made to computer generated shipping forms. One commenter estimates that adding subsidiary hazard information to shipping papers will necessitate modifications to 80,000 active data profiles and case-by-case updates to possibly 200,000 additional data profiles. Another commenter suggests that our cost estimates in the NPRM understate the actual costs that shippers will incur, stating that its costs to comply with the shipping paper revisions proposed in the NPRM will total about $3,600,000. Other commenters agree that substantial time and resources, including modifications to systems and training programs, will be required to implement the new requirements. We agree that additional time is necessary and are extending the mandatory compliance date for this change until October 1, 2005 (*See* § 171.14). This date provides industry two years from the effective date of this final rule to implement the requirement and should help to reduce the implementation burden and costs of compliance with the change.

Requirement To Include Number and Types of Packages on Shipping Papers

We are also revising paragraph (a)(6) regarding the indication on shipping papers of the total quantity of hazardous materials. The amendment makes it mandatory for shippers to include on shipping papers the number and types of packages, such as drums, boxes, jerricans, *etc.,* being used to transport hazardous materials by all modes of transportation. In the NPRM, we proposed a one-year implementation period and requested comments specific to this issue, including suggestions to minimize any impacts that would be associated with the change, such as providing an extended transition period. A number of the commenters suggested that because of the costs associated with implementing the changes, such as to computer programs and systems, we should extend the compliance date. Most commenters suggested that a two or three-year implementation period would be sufficient. We agree that this new requirement warrants additional time to implement. To help reduce the implementation burden and associated costs, we are authorizing use of the current requirements until October 1, 2007 (*see* § 171.14). This date will provide companies four years from the effective date of this final rule.

One commenter requested that we justify the requirement to indicate package types and numbers on shipping papers. We believe that the requirement to indicate types and numbers of packages will enhance the safety and security of hazardous materials transportation while enhancing international harmonization. When incidents occur during transportation, it is essential to know the number of packages present in a given shipment. For example, emergency responders at the scene of an incident would use the information to be certain that they have accounted for all of the packages. After a release of hazardous materials from a motor vehicle involved in a highway traffic accident, it is important for the emergency responders to quickly ascertain the number and types of packages when determining their emergency response actions.

From a security perspective, an indication of the number and type of packages facilitates accountability of the packages. With today's heightened risk of terrorism, the requirement to include the number and types of packages on shipping papers is an effective tool in promoting public safety by allowing carriers, transportation workers, emergency responders and law enforcement personnel to quickly determine whether packages may be missing, such as from theft. The requirement will assist law enforcement personnel in identifying questionable shipments where further investigation may be warranted. The requirement will help deter and prevent hazardous materials in transportation from being used in a criminal manner, such as weapons of terrorism.

Finally, for ease of compliance with the appropriate regulations, international carriers engaged in the transportation of hazardous materials by aircraft generally elect to comply with the ICAO Technical Instructions, while vessel operators generally elect to comply with the IMDG Code. Because the ICAO Technical Instructions and the IMDG Code currently require the number and types of packages to be included on shipping papers, shippers complying with these international regulations are presently subject to conformance with this requirement. Consistency between international regulations and the HMR with respect to requiring the number and types of packages to be included on shipping papers is another step towards our goal of international uniformity.

One commenter requested that we allow the newly required indication of package types and numbers information to be entered before or after the basic description. We agree and have adopted this placement in this final rule.

Several commenters asked whether we would allow abbreviations for package type, noting that EPA allows certain abbreviations on the hazardous waste manifest. We agree that abbreviations may be used for package types and have revised paragraph (a)(6) accordingly.

We reformatted paragraph (a)(5) in response to a comment from the Dangerous Goods Advisory Council (DGAC) requesting clarification on the structure of paragraph. For the purpose of consolidation, we also transferred to paragraph (a)(5) the existing additional requirements for transportation by vessel currently located in § 172.203(i)(1), (i)(2), (i)(3) and (i)(6).

Optional Sequence of Information

Paragraph (b) is revised to allow an alternative to the basic description sequence currently required in this paragraph. Under the alternate format, the identification number is listed first, followed by the proper shipping name, the hazard class and subsidiary risk, and packing group number. Several commenters stated that authorizing a new sequence of information will cause confusion, and two commenters requested that a single sequence of information be adopted at the international level. While we believe that the new sequence is necessary for harmonization with international regulations, we are making it optional, rather than requiring it in this final rule. We agree that it would be beneficial to work with the appropriate international bodies to adopt on a single sequence of information.

Structure of 172.202(a)(5)

One commenter requested that 172.202(a)(5) be restructured to clarify the requirements. We agree and have made the necessary changes.

Description of Cylinders on Shipping Papers

One commenter requested that cylinders not be excepted from the requirement to indicate the total quantity on the shipping paper. This comment is outside the scope of this rulemaking as it addresses an existing requirement. Another commenter requested that we clarify § 172.202(a)(5) to indicate that cylinders may be described by a net or gross quantity, in addition to by number of cylinders. The commenter is correct that a net or gross mass may be used to describe cylinders and that this information is not mandatory. As previously discussed, however, we are requiring that the number and types of packages be included on shipping papers. This final rule, therefore, continues to allow the option of indicating the mass of cylinders, but makes mandatory the indication of the number of cylinders in a shipment. One commenter questioned whether airbags containing compressed gas cylinders would be subject to this requirement. We do not consider cylinders employed for use in airbags or other articles to be in the package, so the requirement does not apply in this instance. In the case of airbags and other articles containing cylinders, the package containing the airbag or article is considered to be the package.

Requirement To Indicate Net or Gross Mass

One commenter noted that the removal of the words ''as otherwise appropriate'' implies that shippers can no longer use other more relevant units of radioactivity to account for the quantity of radioactive materials in a consignment. This was not our intent, and we have specifically added text to allow the use of units more appropriate to radioactive material shipments.

Several commenters suggested that we eliminate the words ''net mass'' and ''gross mass'' from the example ''1box, net mass, 30 kg'' or ''2 drums, gross

mass, 200 kg.'' We agree that the example may be misleading and have removed the example from the section.

Several commenters noted that the sentence ''Abbreviations may be used to specify the unit of measurement for the total quantity'' is redundant because it is permitted in 172.202(c). We agree and have removed the sentence.

One commenter requested we retain the current phrase ''* * * of the hazardous material covered by the description * * *'' and not adopt the new phrase ''* * * of each hazardous material bearing a different proper shipping name, UN number or packing group * * *.'' We agree that the existing wording is adequate considering each element of the proposed language is a part of the ''description'' and have retained the current text.

One commenter suggested we use the term ''packages containing only residue'' rather than the term ''empty packagings.'' This comment is outside the scope of this rulemaking.

One commenter requested that we require a gross mass, and not a net mass or volume, due to placarding requirements. Because this was not proposed in the NPRM, the comment is beyond the scope of this final rule.

Section 172.203. We are removing and relocating paragraphs (i)(1), (i)(2), (i)(3) and (i)(6). With adoption of the requirement to indicate types of packagings on shipping papers in § 172.202, we are consolidating the four vessel requirements in § 172.203(i) by moving them to the description requirements in § 172.202(a)(5). The paragraphs address additional shipping paper requirements for the identification of the type, number and gross mass of packagings, and the identification of subsidiary hazards consistent with international standards. The current paragraphs (i)(4) and (i)(5) are redesignated (i)(1) and (i)(2).

Section 172.301. Paragraph (a)(1) is revised to reflect the new alternative marking requirement in § 172.315 for packages containing limited quantities of hazardous materials. Packages containing limited quantities of hazardous materials must be marked with the proper shipping name in accordance with § 172.301, or in accordance with the new alternative marking in § 172.315 that consists of an identification number placed within a diamond. (See § 172.315). Several commenters requested that we allow a shipment to be transported solely via highway and rail when marked and labeled for transport by aircraft. These comments, however, were based on the NPRM text which proposed to incorporate the marking as a mandatory requirement. Because we are adopting the marking as an alternative to the current requirements, a limited quantity package prepared for air transport is also acceptable for transportation solely by highway and rail without adding the marking as specified by § 172.315.

Section 172.312. A new paragraph (c)(6) is added to allow packages containing liquid infectious substances in primary receptacles not exceeding 50 ml (1.7 oz) to be excepted from the requirements in § 172.312(a). Section 172.312(a) requires liquid hazardous materials packaged in non-bulk combination packagings to be packed with closures upward and to be legibly marked with orientation markings.

Section 172.315. A new section, § 172.315, is added as an alternative marking requirement for packagings containing limited quantities of hazardous materials. This section allows limited quantity packagings to be marked with the identification (ID) number placed within a diamond. After considering the comments discussed below, we are incorporating the diamond marking into the HMR as an alternative to, rather than a replacement of, the existing marking requirements for limited quantities. In addition, the UN Committee of Experts on the Transport of Dangerous Goods will be addressing requirements for limited quantities and consumer commodities during their 2003–2004 work program. While we are not aware of any proposals to change the package marking for limited quantities, there is a possibility that changes may be discussed and adopted, and therefore, replacing the existing requirement would be premature at this time.

Not all commenters support adopting the requirement. Several commenters opposed the requirement because the diamond marking is not contained in the ICAO Technical Instructions. One commenter incorrectly stated that the requirement is not contained in any of the international standards, including the IMDG Code, and asked us to explain our purpose for proposing the limited quantity marking. Currently, the diamond marking is contained in Chapter 3.4.5.1.2 of the IMDG Code and in Chapter 3.4 of the UN Recommendations. By incorporating the marking as an alternative requirement, persons have the flexibility to continue using the current limited quantity package marking.

With respect to the ICAO Technical Instructions, we agree with the commenters' argument that incorporating the marking requirement will create unnecessary problems. Several commenters noted that under the current limited quantity requirements, they may mark and label packages containing limited quantities prepared for air transport and also ship them domestically by ground. URS Corporation stated that if we adopted this requirement, packages prepared for air transport displaying a hazard label and marked with the ID number and proper shipping name would need to be additionally marked with the new limited quantity marking when also transported by highway or rail. This would preclude shippers from using a single system of marking and labeling when packages marked and labeled for air transport are also being transported by highway or rail. We agree that applying the new limited quantity marking for packages prepared for air transport would be redundant. The commenters requested that we allow a shipment to be shipped via ground when marked and labeled for air transport, regardless of whether any portion of the transport includes transportation by air. In response to the commenters' request, we are revising the regulatory text in paragraph (a) by adding the words ''Except for transportation by aircraft.''

Some commenters requested an extended transition period, until October 1, 2006, for the continued use of the existing limited quantity requirement. The commenters pointed out that the October 1, 2004 delayed implementation date may not afford industry enough time to clear their stocks of packagings marked in accordance with the current marking requirements. With the adoption of this requirement as an option, the current limited quantity marking is retained and, therefore, an extended transition period is not necessary.

The Florida Department of Environmental Protection, Bureau of Emergency Response (FDEP–BER) believes that all packages should display the proper shipping name in order to determine the contents. FDEP–BER stated that ID numbers are not as easy and quick to identify as proper shipping names. In addition, using the ID number instead of a proper shipping name may require a person to consult reference materials to determine the contents of the packages because certain ID numbers apply to more than one chemical or reference only a generic shipping description that lacks the specific composition of the material. While we recognize the concerns of the commenters, we do not agree that indicating the UN number in lieu of the proper shipping name will compromise safety. We believe the proper shipping name can be quickly determined using

the Emergency Response Guidebook's section containing ID numbers.

One commenter requested a clarification regarding color specification for the limited quantity marking. Consistent with the UN Recommendations and the IMDG Code, we are not restricting the marking to a specific color.

Two commenters requested early voluntary compliance, as of January 1, 2003, with the new limited quantity marking. Because the NPRM did not include this requirement together with the proposed early compliance date for the incorporation-by-reference materials, the request is considered beyond the scope of this final rule. We are, however, authorizing immediate voluntary compliance upon the date of publication of this final rule.

Based on the above discussion, we are adding a new section, § 172.315, as an alternative marking requirement for packages containing limited quantities of hazardous materials. When marked in accordance with this section, limited quantity packages must be marked with the identification (ID) number placed within a square-on-point. Marking the proper shipping name on limited quantity packages is not required when using this marking, but is permissible. The line forming the square-on-point must be at least 2 mm thick and the height of the ID number no less than 6 mm. For packages containing more than one limited quantity of hazardous materials with different ID numbers, the packaging must be marked with either individual diamonds bearing a single ID number, or a single diamond large enough to include each applicable ID number. The marking must be durable, legible and of a size relative to the packaging as to be readily visible.

Section 172.321. A new section, § 172.321, is added to incorporate an air eligibility marking requirement into the HMR for non-bulk packages offered for transportation by aircraft. Section 172.321 replaces the proposed § 172.323 as the location for this requirement because § 172.323 is now the marking section for infectious substances. The marking certifies compliance with all the applicable air transport requirements that apply to a package containing hazardous materials that is offered for transport by air, including pressure differential requirements, package markings and labels, inner packaging limits, selection of appropriate types of packagings, use of closure instructions for inner packagings, use of absorbent materials, application of the cargo aircraft handling label (when applicable), and proper classification of the contents of the packaging.

We received approximately 10 comments addressing the proposed air eligibility mark. Some commenters are in favor of the marking, but request certain revisions, while other commenters are opposed to the adoption of the mark altogether.

Several commenters addressed the distinction between the use of the words ''package'' and ''packaging.'' The ICAO's use of the word ''package'' in the Technical Instructions and our use of the word ''package'' as proposed in the NPRM has led to misunderstandings of the meaning and applicability of the air eligibility mark. One commenter suggested that we postpone adoption of this requirement until ICAO has considered this issue. Another commenter suggested that we submit a variation to ICAO if we adopt the air eligibility mark as proposed. We interpret the current ICAO text that states shipments must ''meet all the applicable requirements for air transport'' to include the packaging plus its contents (the ''package'') and not the packaging alone. On the basis of a proposal to ICAO to revise the Technical Instructions by clarifying that the certification marking applies to the package, the ICAO Dangerous Goods Panel recently agreed to amend the ICAO Technical Instructions to indicate that the air eligibility mark is an indication that the shipper has determined that the ''package'' meets the applicable air transport requirements. Based on the foregoing, the text, as proposed, will be consistent with the ICAO Technical Instructions. Therefore, we believe it is appropriate to adopt this change at this time.

The Air Transport Association (ATA), the Air Line Pilots Association (ALPA) and Delta Airlines stated that the wording ''each person'' in paragraph (a) suggests that any person, including the carrier and the forwarder would be responsible for marking the package with the air eligibility mark. ALPA maintains that it is important for the marking to be applied when the package is being prepared. We agree that the offeror is the appropriate person to assume responsibility for the mark and that the carrier is responsible for ensuring that the mark is present. We are revising paragraph (a) by replacing the wording ''each person who offers for transportation or transports'' with ''each person who offers for transportation.'' This revision also responds to a comment that we received from DGAC in which DGAC cited the Federal hazardous materials transportation law concerning ''Representation'' and questioned the authority to place the air eligibility marking on a package. DGAC stated that, as proposed, requiring the mark to represent total certification of compliance would suggest that the only person who may ''display the marking on a package would be the same person making the certification'' in accordance with § 172.204. DGAC went on to question whether a packaging manufacturer may pre-certify compliance because there is no signature involved in the display of the marking. As discussed in the paragraph above, it is the offeror who is responsible for the certification. The packaging manufacturer is not certifying that the package is in compliance with all applicable requirements. The marking has no significance as a certification until the package is offered for transportation. With respect to the statement suggesting that only a signature can represent certification, the commenter is incorrect. Although the air eligibility mark, as a form of certification, does not waive the shipping paper certification, the air eligibility mark certifies that the package meets all applicable requirements for air transport. This is consistent with existing regulatory text in § 172.316 that states the ORM–D marking is the certification that the material is properly described, classed, packaged, marked and labeled.

Several commenters disagree with allowing the air eligibility mark to be hand drawn. Currently, the HMR does not prohibit any markings from being hand drawn provided all applicable specifications are met. We did not propose a specific graphic for the marking and do not believe it is necessary to single out the air eligibility mark from being hand drawn as long as it clearly depicts an airplane in a circle and says ''Air Eligible.'' However, we may consider proposing a specific graphic for the air eligibility marking in future rulemaking, preferably based on a consensus standard.

Dupont, the Air Transport Association (ATA), ALPA and Delta Airlines disagree with allowing the air eligibility mark to be preprinted on packages. The commenters believe that preprinted packages can inadvertently be used for shipments that are not suitable for air transport. Currently, the HMR authorizes UN markings and other package markings to be preprinted and we view the air eligibility mark as similar. In certain instances it may be more cost effective for the shipper to preprint the mark. It is our position that it is the responsibility of the offeror to ensure that every package bearing the

mark is air eligible, regardless of whether it is preprinted or not.

One commenter incorrectly questions why we except dry ice from the air eligibility mark when the ICAO Technical Instructions do not provide the exception. The ICAO Technical Instructions contain the same exception in the dry ice packing instruction (see ICAO Technical Instruction 904).

One commenter opposing the incorporation of the air eligibility mark is concerned that currently marked shrink-wrapped packages will be required to be remarked. As discussed earlier in this preamble, we are providing an extended transition period, until October 1, 2004, which will allow sufficient time for such packages to be transported as they are currently marked.

One commenter believes there is not enough space for another marking and states that if the package has been tested under UN certification, ''it is fit for air.'' We disagree. The size requirement specifies only that mark be visible. Meeting the UN packaging test requirements is not an assurance that the package is suitable for its contents or that it complies with the applicable air transport requirements.

Several commenters are opposed to the air eligibility marking stating that our interpretation of what the air eligibility mark certifies is too broad or that the mark is unnecessary because the certification statement on the shipping paper is sufficient. We disagree. The air eligibility mark communicates the certification directly on the package. In addition to consistency with the ICAO Technical Instructions, we believe that the use of an air eligibility mark will be beneficial in heightening shipper awareness and responsibility for meeting the additional air transport package requirements. Adoption of this requirement will reduce the inadvertent acceptance for transportation by aircraft of packages that conform only to highway, rail or vessel requirements.

Based on the above discussion, we are incorporating the air eligibility marking requirement into the HMR for all non-bulk packages offered for transportation or transported by aircraft with certain exceptions. The shipper is responsible for the application of the marking, but is not required to physically place it on the package. The marking can be applied by using a durable sticker or label, preprinting it on the packaging, or drawing it on the package by hand. The marking must be durable, legible, and of such size relative to the packaging as to be readily visible. Preprinting by the packaging manufacturer requires the manufacturer and the shipper to closely coordinate to ensure that the package meets the applicable air transport requirements. The shipper is responsible for ensuring that the package meets the applicable air transport requirements.

A number of changes to the proposed text are made in this final rule to clarify the purpose of the marking and requirements. The text of paragraph (a) is revised to more clearly identify the purpose of the mark as certification by the person offering a package that the package meets requirements for air transportation and to provide examples of those requirements. A sentence is added to § 172.321(a) to clarify that the air eligibility mark does not eliminate a requirement for a certification on a shipping paper. Paragraph (b) is reformatted and a sentence is added to clarify that an overpack or outer packaging containing a cylinder must be marked rather than the cylinder. Paragraph (c) is revised editorially and to clarify that packagings which are excepted from marking requirements are not subject to the air eligibility marking. A new paragraph (d) is added to clearly indicate that the air eligibility marking may not be displayed on a package which does not meet requirements for air transportation.

Section 172.411. We are revising the section heading and paragraphs (b) and (d), and adding new paragraphs (e) and (f). In the June 21, 2001 HM–215D final rule, we removed the requirement to differentiate between primary and subsidiary labels by requiring the class number to be displayed on both types of labels. The primary explosive label, but not the explosive subsidiary label, required the appropriate division number and compatibility group to be displayed. This disparity was an oversight, and we are correcting this section by adding the pictorial of the explosive subsidiary label and revising the text accordingly.

Section 172.504. Based on an oral comment we received from a shipper, paragraph (g) is editorially revised to explain the distinction between the words ''explosive articles'' and ''explosive substances.'' The commenter stated that the paragraph is often misinterpreted because the two phrases are not understood as having different meanings.

Part 173

Section 173.2a. In paragraph (b), the second line of the title of the Precedence of Hazard Table is editorially revised to include the word ''division.'' In addition, the Table is revised for the first three entries by inserting ''4.3'' under the Division 4.3 column to indicate that Division 4.3 takes precedence over Class 3 when classifying a material having more than one hazard.

Section 173.21. In paragraph (f)(3)(ii), we are updating the location reference to the control temperature requirements in the IMDG Code to its current location in Chapter 7.7.

Section 173.22. We are revising paragraph (a)(4) to clarify that, in addition to complying with the Part 178 requirements, the shipper is responsible for ensuring that packages comply with the Part 173 requirements. This revision is consistent with the new amendments to § 173.24a relative to closures, and to § 173.27 relative to packages intended for air transport.

Section 173.24. Certain comments that we received are beyond the scope of this rulemaking and will not be addressed in this final rule. In the NPRM we proposed to add a new paragraph (b)(4) and revise paragraph (f)(1). Paragraph (b)(4) proposed general requirements applicable to the integrity of packagings. It also proposed to specify that packagings must be closed in accordance with the closure instructions provided by the manufacturer. Prior to this final rule, § 178.2 required packaging manufacturers to provide closure instructions. Although implied under the requirements of §§ 173.22a(2) and 173.24(d) and (f)(2), there was no specific requirement that shippers follow closure instructions. Also in the NPRM, paragraph (f)(1) proposed to revise requirements for the construction and design of closures.

The National Solid Wastes Management Association (NSWMA) submitted a comment supporting the requirement that packages be closed in accordance with the manufacturer's instructions. The Reusable Industrial Packaging Association (RIPA) also supported the proposal, but requested a revision to permit shippers to close packages in a manner that differs from the closure instructions in § 173.28 provided such procedures are fully documented. RIPA states that the word ''must'' is restrictive for the requirement that packages must be closed in accordance with the manufacturer's instructions and suggests the word be replaced with ''should.'' The commenter further stated that it is impossible for a packaging manufacturer to anticipate every climatic and work condition in which filling may take place and that the manner in which packages are closed often varies from plant to plant. The commenter recommends that closure procedures varying from the

manufacturer's instructions be authorized.

We agree that there may be cases in which certain deviations from the specific closing instructions provided by the manufacturer may be warranted, and note that certain changes are currently permitted under packaging variations in Subpart M of Part 178. We do not agree with revising the word ''must'' to ''should.'' Where the manufacturer has specified closure instructions, those instructions may be critical to performance of the packaging in transportation. We understand the commenter's concerns that a shipper should be able to vary from the closure instructions if an equivalent level of safety is achieved and the procedure is documented. However, to the extent that such changes are not currently permitted and were not proposed in the NPRM, we consider them outside the scope of this rulemaking.

RIPA's concerns highlight the need for collaboration between packaging manufacturer and customer in the design, testing and use of packagings. There is a need for manufacturers of hazardous materials packagings to take into account the various conditions of transport that the packaging may experience. If a packaging has limited capability under specific conditions, then the manufacturer's instructions should indicate these limitations. Effective communication of the packagings' capabilities will serve to avoid the potential for a shipper to inadvertently use a packaging that was not intended for certain transport environments. The closure instructions should provide specifics relative to the packagings' capabilities when specific conditions of transport would impact the packagings' capability to contain hazardous materials.

RIPA commented that several different gasket configurations may need to be used dependent on the filling and transport conditions. If this is the case, and the different gasket configurations were taken into account in the packaging design qualification, the closure instructions should provide appropriate closure information with respect to all of the gasket configurations that were approved according to the design type testing.

Shippers should not be arbitrarily changing closure devices without coordination with the packaging manufacturer or conducting additional testing to verify that the packaging integrity has not been compromised. As specified in Subpart M of Part 178, the substitution of closures or gaskets (for example, changing from a metal bung closure to a plastic bung closure on a closed head steel drum) may change the packaging design type for purposes of UN performance design qualification testing. Closure changes are permitted according to the selective testing variations in accordance with § 178.601(g)(1) and (g)(5). Only when the conditions of the selective testing conditions have been met (including the specified limited additional testing according to § 178.601(g)(5)), if applicable, may a different closure or gasket be used without the packaging being considered a new design requiring the full UN performance testing prescribed in Part 178. The regulatory text we are adopting in this final rule does not negate the ability of the shipper to use different closures consistent with the selective testing provisions.

The instructions provided by the manufacturer should indicate variations to closure procedures that would compensate for environmental conditions or conditions based on the types of materials that are contained in the packaging. To ensure proper closure of packagings and to avoid leaks in transport, shippers and manufacturers need to work in coordination to ensure that the closure methods used will provide an effective seal taking into account the various conditions involved during transport.

Additionally, RIPA commented that (b)(4) and (f)(1) should use consistent wording, and that the text in (f)(1) concerning the requirement for closures to be designed in a manner that make improper closure unlikely should be removed. We do not agree with RIPA's proposed editorial revisions that suggest adding wording such as ''reasonable changes in temperature,'' ''normal altitude variations'' or ''normal vibration ranges.'' We believe this wording is vague and will not enhance the clarity of either paragraph. We agree that the sentence, as proposed in the NPRM, requiring the closure device to be so designed that it is unlikely to be incorrectly or incompletely closed may not be realistic and may be subject to a range of interpretation. We are not, therefore, including the requirement in this final rule.

We believe that the amendments to this section will enhance safety by ensuring that adequate consideration is given to the effects of transportation conditions on packages and that packages are securely and effectively closed.

Section 173.25. In paragraph (a)(2), we are including the air eligibility marking as part of the marking requirements pertaining to overpacks.

Section 173.27. We are revising paragraph (e) and adding a new paragraph (i). Paragraph (e) is revised to require packagings with plastic and metal inner packagings to be packaged using absorbent material when Packing Group I or II liquids of Class 3, 4 or 8 or Division 5.1, 5.2 or 6.1 are offered for transport by passenger or cargo aircraft. Prior to this amendment, the requirement to use absorbent material applied to Packing Group I and II materials when offered for transport by passenger aircraft, and to Packing Group I materials when offered for transport by cargo aircraft. We are applying this requirement to Packing Group II materials offered for transport by cargo aircraft. Existing absorbent material requirements apply when inner packagings are constructed of glass or earthenware. Prior to this final rule, the absorbent material requirement did not apply to Division 5.2 liquids. The amendments are consistent with the 2003–2004 edition of the ICAO Technical Instructions.

We received four comments concerning the absorbent material requirement in paragraph (e). Two commenters suggested that we clarify or remove paragraph (e)(5), which provides an exception from the use of absorbent materials when the inner packagings are not fragile. Paragraph (e)(5) is existing text that was not proposed to be revised in the NPRM. However, we agree that this exception needs to be reconsidered and we have submitted a working paper to the ICAO Dangerous Goods Panel to address it. One commenter, addressing paragraph (e)(2), believes that one absorbent material requirement should apply to transportation by passenger and cargo aircraft. Because these are existing requirements that we did not address in the NPRM, the comment is beyond the scope of this rulemaking.

The Conference on Safe Transportation of Hazardous Articles (COSTHA) stated that the proposed regulatory text is broader than that contained in the ICAO Technical Instructions because it requires absorbent material for all liquid hazardous materials except Class 9. The commenter suggests that we align the paragraph with the wording in the ICAO Technical Instructions by specifically stating that the applicability of the requirement is for liquids in Classes 3, 4, 8 and Divisions 5.1, 5.2 and 6.1. It was not our intent to differ from the requirements of the ICAO Technical Instructions. We agree and are revising the regulatory text accordingly.

We are also adding a new paragraph (i) to refer the reader to new section § 172.321 for the air eligibility marking

requirement for packagings containing hazardous materials being transported by aircraft. See § 172.321 for the discussion on this requirement.

Section 173.62. In § 173.62, in the paragraph (b) Explosives Table, the entry ''UN0503'' is added to the packing instruction P135. This is consistent with international regulations. UN0503 is assigned to the proper shipping name ''Air bag inflators, *or* Air bag modules, *or* Seat-belt pretensioners,'' Division 1.4G (also see § 172.101, HMT). The Class 9 ''Air bag inflators, *or* Air bag modules, *or* Seat-belt pretensioners'' entry continues to be packaged in accordance with § 173.166.

In addition, the obsolete ID number UN0223 is removed from the packing instruction 112(b) in the Explosives Packing Instructions Table. The entry was removed from the § 172.101 Table in a previous rulemaking.

Section 173.115. In paragraphs (d) and (e), we are amending the regulatory text that describes ''non-liquefied compressed gas'' and ''liquefied compressed gas.'' The amendment revises the reference temperature from 20 °C to −50 °C, consistent with internationally accepted definitions for gases and consistent with the twelfth edition of the UN Recommendations.

We are also dividing compressed liquefied gases into high and low pressure categories. The UN Subcommittee revised the terminology for gases to align it with the terminology used in the International Organization for Standardization (ISO) Standard 10286. This standard establishes the terminology applicable to gas cylinders and provides definitions for gases. The new regulatory text affects 11 entries in the § 172.101 Table by removing the word ''compressed'' from the proper shipping names. Under a separate rulemaking, we will address whether the affected gases should be reassigned to more appropriate packagings sections, such as revising the packaging authorization from § 173.302 to § 173.304 in Column (8B) in the § 172.101 Table. We will also address the use of the high- and low-pressure compressed liquefied gas designations.

Sections 173.152, 173.153 and 173.154. The following sections are revised by increasing the inner packaging net capacity limit for Packing Group III liquids from 4 L (1.1 gal) to 5 L (1.3 gal): § 173.152(b)(2), exceptions for Division 5.1 oxidizers and Division 5.2 organic peroxides; § 173.153(b)(1), exceptions for Division 6.1 poisonous materials; and § 173.154(b)(2), exceptions for Class 8 corrosive materials. Section 173.152(b)(4)(ii) is also revised by raising the net capacity of inner packagings containing PG II flammable liquids in polyester resin kits from 1 L (0.3 gal) to 5 L (1.3 gal) each.

Section 173.159. A new sentence is added to paragraph (a) requiring packagings for certain batteries to include an acid/alkali proof liner or a supplementary packaging with sufficient strength and adequate sealant to prevent leakage of electrolyte fluid in the event of spillage. This requirement applies to packagings transported by aircraft and containing electric storage batteries with electrolyte acid or alkaline corrosive battery fluid.

A new paragraph (d)(4) is added to require non-spillable batteries, that are excepted from all other requirements of the HMR, to meet the condition that at a temperature of 55 °C (131 °F), the electrolyte will not flow from a ruptured or cracked case and there is no free, unabsorbed liquid in the battery.

Section 173.161. We are revising this section to specify the packaging requirements for chemical and first aid kits consistent with international standards. We received several comments stating that in paragraph (b), as proposed, the first sentence suggests we are requiring specification packaging for air transport. This was not our intent. The ''except when offered by air'' phrase was intended to apply only to labeling. Therefore, we are revising the first sentence to indicate chemical and first aid kits are excepted from specification packagings for all modes of transportation.

Section 173.166. This section is revised consistent with the removal of the Division 2.2 entry for ''Air bag inflators, compressed gas or Air bag modules, compressed gas or Seat-belt pretensioners, compressed gas,'' UN3353 (see § 172.101, HMT). We are authorizing reclassification to Class 9 without further testing for air bag inflators, air bag modules and pretensioners previously approved for transportation as Division 2.2. We received comments from NAAHAC supporting the adoption of this revision.

Section 173.185. Paragraphs (e)(4) and (e)(7) are revised and a new paragraph (k) is added. We are combining paragraphs (e)(4) and (e)(5) into one paragraph, (e)(4), and removing and reserving paragraph (e)(5).

The revised paragraph (e)(4) allows the use of dividers or other suitable means as alternative methods to inner packagings for effective means of preventing short circuits of lithium cells and batteries.

Based on a comment that was beyond the scope of the HM–215D final rule, we are revising paragraph (e)(7) by applying the prohibition to offer for transportation or transport certain cells and batteries to only those with a liquid cathode containing sulfur dioxide, sulfuryl chloride or thionyl chloride. Prior to this amendment, any cell or battery with a cell that has been discharged to the extent that the open circuit voltage is less than 2 volts, or less than two-thirds of the open circuit voltage of the fully charged cell, whichever is less, is prohibited from being offered for transportation or transported. We are including sulfuryl chloride in this amendment. The UN Recommendations do not include this prohibition. The reduced voltage condition was included in the HMR to address lithium sulfur dioxide, sulfuryl chloride and lithium thionyl chloride primary batteries on the basis of safety issues with low-voltage cells. The lithium sulfur dioxide batteries present hazards in transportation when the sulfur dioxide is depleted. The depletion can cause the removal or breakdown of the passivation film on the lithium anode which could result in a undesirable exothermic reaction of the lithium metal and the electrolyte solvent leading to high temperatures, cell venting, cell rupture, and fires. In addition, a new paragraph (k) is added to allow batteries with a mass of 12 kg or greater and having strong, impact-resistant outer casings to be packed in strong outer packagings, protective enclosures, or unpacked on pallets. Packaging in this mannermay be transported by cargo-only aircraft and is permitted only with the approval of the Associate Administrator.

Additional amendments to the requirements for lithium batteries are being addressed in a separate rulemaking, under Docket HM–224C (NPRM published on April 2, 2002, 67 FR 15510). One of the proposals under Docket HM–224C addresses a reorganization of § 173.185.

Section 173.216. We are moving the exceptions for asbestos in paragraph (b) to a new special provision (see Special Provision 156 in § 172.102). Paragraph (b) excepts asbestos immersed or fixed in a natural or artificial binder material and also excepts asbestos contained in manufactured products. We understand that because the exception is located in § 173.216 and referenced in Column (7) of the HMT for non-bulk packagings, the exception appears to be limited to non-bulk packagings. To clarify the applicability, we are removing and reserving paragraph (b) and transfering the exception to new Special Provision 156. The exception continues to apply to three entries, ''Blue asbestos (Crocidolite) or Brown asbestos (amosite, mysorite),'' UN2212, ''White

asbestos (chrysotile, actinolite, anthohyllite, tremolite),'' UN2590, and ''Asbestos,'' NA2212.

Section 173.218. Paragraph (a) introductory text is revised and paragraph (b) is removed. Paragraph (a) introductory text is editorially revised to reflect the relocation of the requirement previously contained in paragraph (b). In paragraph (b), the requirement for the maximum temperature at which fish meal or fish scrap may not be offered for transportation is revised from 49 °C (120 °F) to 35 °C (95 °F), or 5 °C (41 °F) above ambient temperature, whichever is higher, and relocated to Special Provision 155 (see § 172.102).

Section 173.220. We are adding a new paragraph to include additional requirements for certain engines and vehicles. Existing paragraph (e) is redesignated (f) and the new paragraph becomes paragraph (e). The new paragraph includes several additional requirements for internal combustion engines and vehicles equipped with certain devices when transported by aircraft or vessel. When engines are shipped separately, we are requiring that all fuel, coolant, hydraulic fluids or any other hazardous materials that meet the definition of a hazardous material, must be drained as far as practicable, must have disconnected fluid pipes sealed with leak-proof caps that are positively retained, and for transportation by aircraft, any installed theft-protection devices, radio communications equipment or navigational systems must be disabled.

We received several comments to the proposed new paragraph. UPS supports the revisions and believes the new paragraph will help eliminate confusion when offering or transporting engines. URS Corporation stated that the last sentence requiring certain equipment to be disabled should be omitted because it is not contained in the UN Recommendations. The commenter is correct that the requirement is not contained in the UN Recommendations, however, because it is contained in the ICAO Technical Instructions, we are revising the sentence to apply to air shipments only.

Lynden Incorporated, which represents several tug/barge operators, commented that the terminology ''internal combustion engine'' has become synonymous with the term ''vehicle.'' Lynden Incorporated states that as proposed, paragraph (e) may lead to confusion with respect to which engines must be drained of fluids and must have disconnected fluid pipes sealed with leak-proof caps. Although the words ''shipped separately'' in the proposed text were intended to mean that we are not referring to engines that are installed in a vehicle or machinery, we have decided to further revise the sentence by specifying that the paragraph pertains to engines that are not installed in vehicles or equipment.

Finally, COSTHA requested that paragraphs (a)(2) and (c) be aligned with new Special Provision 157 and the current Special Provision 134 by specifically referencing sodium and lithium batteries. We agree and are making the revisions accordingly.

Section 173.223. We are adding a new packaging section, § 173.223, for musk xylene. Prior to this amendment, the authorized packaging section for musk xylene, § 173.214, required approval by the Associate Administrator. We are adding a new section that is consistent with the UN packing instruction P409 assigned to musk xylene, so that approval by the Associate Administrator is no longer necessary.

Section 173.224. In paragraph (b)(4), the incorrect reference for bulk packaging authorizations, § 173.225(d), is corrected to read § 173.225(e). In the Self-Reactive Materials Table following paragraph (b)(7), five entries in Column (1) are revised and four new entries are added. The five revised entries appear first as ''removes'' and then ''adds'' in the regulatory text section of this rulemaking. For the entry ''2,2′-Azodi(isobutryonitrile) as a water based paste,'' the misaligned column entries are corrected. A new Note 4 is added following the table for assignment to the new entry ''2-Diazo-1Naphthol sulphonic acid ester mixture, Type D.''

Section 173.225. We are amending the paragraph (b) Organic Peroxide Table, the Notes following the Table, and paragraphs ¶ (e)(3)(xii) and (e)(5). The amendments to the Organic Peroxide Table include the addition of bulk and IBC packaging authorizations for certain entries, the addition of several new entries and various corrections to certain entries.

Note 9 following the Table is revised by correcting the paragraph reference ''(e)(3)(ii)'' to read ''(e)(3)(xii).'' A new Note 27 is added for the new entry ''Peroxyacetic acid, distilled, Type F, stabilized,'' UN3110. A new Note 28 is added to clarify that ''Peroxyacetic acid'' and Peracetic acid'' are synonymous.

Paragraph (e)(3)(xii) is revised to clarify that DOT Specification 57 portable tanks are not subject to any other requirements in paragraph (e).

We are also moving the approval provisions contained in the § 172.102(c)(4) Table 2, Special Provision IB52, to paragraph (e)(5). We believe this is a more appropriate section for the approval provisions, which we are expanding to provide for the use of IBCs other than those indicated in the IB52 Table when approved by the Associate Administrator.

Section 173.244. We are revising paragraph (c) by adding a clarification that UN portable tanks are also authorized for use if a T code is specified in Column (7) of the HMT for the specific hazardous material.

Section 173.306. We are revising the paragraph heading in § 173.306(f) by adding the proper shipping name ''Articles, pressurized, pneumatic *or* hydraulic containing *non-flammable gas.*'' The revision is based on the proper shipping name replacing the domestic entry ''Accumulators, pressurized, pneumatic *or* hydraulic (*containing non-flammable gas*),'' which was removed in HM–215D published on June 21, 2001. We received oral comments requesting the addition to the paragraph heading to clarify the intent of the paragraph.

We are also adding a new paragraph (j) to reference the exception for certain compressed gases in § 173.307.

Section 173.307. We are adding a new paragraph (a)(5) to except Division 2.2 gas aerosols with a capacity of not more than 50 ml and with a pressure not exceeding 970 kPa (141 psig) from the HMR.

Section 173.418. Consistent with the addition of Special Provision A56, which requires pyrophoric Class 7 (radioactive) materials to be shipped in Type B packages when transported by aircraft, we are amending § 173.418 to reflect this change.

Section 173.422. We are revising the certification statements in paragraphs (a)(2), (a)(3) and (a)(4) to reflect the updated proper shipping names and UN identification numbers currently authorized in the § 172.101 Table for excepted packages of radioactive materials.

Part 175

Section 175.10. We are adding a new sentence to paragraph (a)(4)(iv) to clarify that the paragraph (a)(4) passenger or crew member personal use exceptions apply to aircraft operators when transporting baggage that has been separated from a passenger or crew member before reaching its final destination, including transfer to another air carrier for delivery. The exceptions were included in the HMR to accommodate the needs of the traveling public to allow passengers and crew members to carry certain quantities and types of articles, such as medicines and toiletries, in checked and carry-on

baggage. The existing regulatory text does not clearly indicate that baggage may be transported when not accompanied by the crew member or passenger, such as when the baggage has been separated from the crew member or passenger due to misroutings, delays, etc. Rather than adding a new paragraph (c) as proposed, we are including this clarifying language at the end of paragraph (a)(4).

We received a comment from Alaska Airlines requesting that this exception be clarified to include scenarios in which the baggage is offered to another carrier by adding the words ''or offering'' to the paragraph. Alaska Airlines suggested replacing the words ''when transporting passenger or crew member baggage'' with ''when transporting or offering passenger baggage.'' Alaska Airlines also requested that we extend the passenger or crew member personal use exceptions to carriers in other modes of transportation to accommodate such instances when the passengers' or crew members' bags are transported to their intended destination by a mode of transportation other than aircraft. We do not agree that the addition of the words ''or offering'' is the most appropriate means of addressing the situation whereby one carrier provides separated checked baggage to another carrier for transport to its intended destination. In this scenario, the carrier that provides the baggage to another carrier is not the offeror. The passenger or crew member is the offeror and is responsible for the contents of the baggage. The passenger or crew member is responsible for ensuring compliance with the HMR when the baggage is offered to the carrier.

We agree with Alaska Airlines that the exceptions should apply when an air operator arranges with another carrier to transport the baggage to its intended destination, including by modes other than air. Although we do not agree that the words ''or offering'' should be added as requested by the commenter, we are including revised regulatory text to clarify that the exceptions also apply when a carrier provides the baggage to another carrier for the purpose of reuniting the baggage with the passenger or crew member who offered it.

We are also revising paragraph (a)(25) to allow two small carbon dioxide cartridges fitted in self-inflating life jackets and two spare cartridges to be carried by a passenger or crew member in checked or carry-on baggage. Prior to this amendment, paragraph (a)(25) allowed, with the approval of the aircraft operator, one small carbon dioxide cylinder fitted into a self-inflating life-jacket, plus one spare cartridge.

Section 175.30. We are adding a new paragraph (a)(5) requiring that the air eligibility marking requirement in § 172.321 must be met before a person may accept hazardous materials for transportation by aircraft.

Section 175.90. We are revising paragraphs (b) and (c). Paragraph (b) is revised to include amendments relative to an aircraft operator's responsibility concerning packagings, baggage or cargo that have become contaminated by leaking hazardous materials. This amendment is consistent with the 2003–2004 edition of the ICAO Technical Instructions and is in response to a National Transportation Safety Board (NTSB) recommendation (A–96–30) issued to the Federal Aviation Administration. The NTSB recommendation resulted from an incident involving an undeclared shipment of a hydrogen peroxide solution that leaked, resulting in injuries to airline personnel and a potential fire hazard aboard a passenger aircraft. Paragraph (c) prohibits a person from placing a damaged packaging aboard an aircraft. We are revising the paragraph by including the words ''baggage or cargo'' when referring to damaged or leaking cargo.

Part 176

Section 176.27. In paragraph (c)(2), we are removing the words ''of 49 CFR 176.27(c)'' at the end of the certification statement and adding the words ''of 49 CFR'' or ''of the IMDG Code.''

Section 176.63. We are adding a new paragraph (f) to include the conditions for the authorized stowage of containers on board hatchless container ships.

Section 176.83. We are adding a new paragraph (l) to include the requirements for the segregation of containers on board hatchless container ships. Paragraph (f) is revised to reflect the addition of the new paragraph.

Section 176.84. In the paragraph (b) Table of Provisions, we are adding nine new provisions (codes) for certain stowage and segregation requirements for hazardous materials that are transported by vessel. The terms ''separated from'' and ''away from'' in the codes are defined in § 176.83 of the HMR.

Code 124 is added to the entry ''Ammonium nitrate emulsion *or* Ammonium nitrate suspension *or* Ammonium nitrate gel, *intermediate for blasting explosives,*'' UN3375 and requires the material to be stowed ''separated from'' bromates.

Code 125 is added to the new entry ''Chlorosilanes, toxic, corrosive, flammable, n.o.s.,'' UN3362 and requires segregation to be the same as for flammable liquids; however, also requires UN3362 to be ''away from'' flammable solids.

Code 126 is added to the five current UN1950 aerosol entries and requires segregation to be the same as for Class 9 miscellaneous hazardous materials.

Code 127 is added to ''5-tert-Butyl-2,4,6-trinitro-m-xy-xylene,'' UN2956 and requires packagings carrying a subsidiary risk of Class 1 (explosives) to be segregated as required for Class 1, Division 1.3.

Code 128 is added to ''Fish meal, stabilized,'' UN2216 and ''Fish meal, unstabilized,'' UN1374 and requires stowage to be in accordance with the IMDG Code, sub-section 7.1.10.3.

Code 129 is added to ''Radioactive material, low specific activity (LSA–I) *non fissile or fissile-excepted,*'' UN2912 (the international entry); ''Radioactive material, low specific activity, n.o.s. *or* Radioactive material, LSA, n.o.s.,'' UN2912 (the domestic entry); ''Radioactive material, low specific activity (LSA–II) *non fissile or fissile-excepted,* ''UN3321; and ''Radioactive material, low specific activity (LSA–III) *non fissile or fissile excepted,*'' UN3322. This code requires stowage to be in accordance with Stowage Category A, with certain exceptions noted.

Code 130 is added to ''Radioactive material, Type A package *non-special form, non fissile or fissile-excepted,*'' UN2915 to require Stowage Category A. Certain exceptions are noted.

Code 131 is added to ''Radioactive material, Type A package, fissile *non-special form,*'' UN3327 to require Stowage Category A, with certain exceptions noted.

Code 132 is added to ''Uranium hexafluoride, fissile (*with more than 1 percent U–235*),'' UN2977; ''Uranium hexafluoride, *fissile excepted or non-fissile,*'' UN2978; ''Radioactive material, uranium hexafluoride, fissile,'' UN2977; and ''Radioactive material, uranium hexafluoride *non fissile or fissile-excepted,*'' UN2978. This code requires stowage to be in accordance with Stowage Category A and notes that any supplementary requirements specified in the transport documents must be considered.

Section 176.140. The reference to the IMDG Code in paragraph (b) is updated by removing the wording ''General Introduction.''

Section 176.170. Paragraph (b) is removed and reserved. For alignment with a revision made in Amendment 31 of the IMDG Code, we are removing the

requirement that prohibits freight containers exceeding 6 m (20 feet) in length from carrying more than 5000 kg (11,023 lbs) net explosive weight of most explosive substances. This provision was removed from the IMDG Code because it placed an inconsistent and unnecessary restriction on containers exceeding 6 m (20 ft) in length, while placing no such restriction on smaller containers. We received a comment from the Sporting Arms and Ammunition Manufacturers' Institute supporting this revision.

Sections 176.410 and 176.415. We are updating these sections for consistency with international standards and with the prior removal of ammonium nitrate fertilizer proper shipping names from the HMR.

Part 178

Section 178.2. Paragraph (c)(1)(ii) is revised by clarifying the information that the packaging manufacturer and each subsequent distributor are required to provide to packaging users. We received several comments concerning this revision. DGAC supports the revision stating that the clarification recognizes the flexibility necessary for effective communication between the manufacturer and packaging user. RIPA supports the general intent of the revision and stated that it is consistent with the UN Model Regulations and should result in ensuring that shippers do a better job of closing packages. RIPA believes that packaging manufacturers and distributors should be required to clearly describe the complete closure system needed for proper closure, including inner packagings, and closure procedures used in passing the applicable performance tests. We agree with this statement and believe that the text, as proposed, adequately addressed these intentions.

RIPA also states we should recognize that shippers often diverge from the manufacturer's instructions to accommodate site-specific conditions, and that ''recommended closure torque values may safely be expressed as minimum values, median values, or a range of values.'' In response to RIPA's comment about allowing shippers to deviate from the closure instructions, our intent, as stated in the NPRM, was to clarify the information that the packaging manufacturer must provide. We did not propose provisions for deviating from closure instructions and considered these recommendations beyond the scope of this rulemaking. For the same reasons, we disagree with RIPA's recommendation to use the phrase ''procedural guidelines for closure recommended by the packaging manufacturer'' instead of ''procedures to be followed.'' RIPA's proposal that we add a new paragraph (c)(1)(ii)(A) to allow the use of torque values is not necessary because current requirements do not preclude ranges of values from being specified in the closure instructions.

RIPA also states that ''the manner in which shippers (*i.e.* fillers) close packagings will often vary from plant to plant'' and provides an example indicating ''that some shippers will tighten drum plugs just prior to shipping to account for possible expansion of the metal or plastic that results from heat exposure that occurs from the time the drum is filled and the time it is placed on a transport vehicle and that other plants have found no need for such a practice.'' Our position is that the manufacturer could easily and realistically include guidance in the closure instructions to indicate, for example, that ''after filling and prior to transport, the shipper should check the tightness of closures to determine if the effects of heating, cooling or gasket relaxation have resulted in the need to tighten the closure.'' While we agree that the shipper has the responsibility for determining the suitability of packagings for the hazardous materials offered for transport, and for ensuring that a package is assembled, closed, or otherwise prepared for transport in compliance with the applicable specifications and requirements for the applicable packaging design type, we believe that the manufacturer needs to provide specific information to allow the shipper to fulfill his responsibilities. The amendments to this section are intended to improve the quality of information provided by manufacturers to shippers in order to enhance safety.

PPG Industries submitted a comment requesting that the last sentence concerning the package being capable of withstanding the pressure differential requirements be removed. PPG Industries indicated that the pressure-differential capability needed by a given packaging is dependent on the material packaged, and that the packaging manufacturer cannot determine full compliance. Single packages for containing liquids are tested and marked with a pressure test rating, which may or may not be suitable for air shipment. It is up to the shipper to determine whether a packaging is suitable for air shipments based on it size, and to determine the appropriate pressure test capability to contain the particular hazardous material packaged. While we agree that the shipper must determine that the package is suitable for the intended hazardous material to be transported, we do not agree that the requirement for the manufacturer to provide guidance to assist the shipper in ensuring that the packaging meets the relevant air transport pressure differential requirement is beyond the capability of the packaging manufacturer. For example, the instruction could indicate that the inner packaging was successfully tested to a pressure differential test at 95 kPa and clearly describe the complete closure system needed for proper closure and the closure procedures used in passing the applicable performance tests. While some hazardous materials may require a different pressure differential, the closure instructions should be sufficient to allow the shipper to determine whether the packaging is suitable for the material, modes of transport and transport conditions. The closure instructions should provide sufficient details relevant to the procedures for closures consistent with the procedure necessary to enable the packaging to meet the pressure differential for which it was tested. Considering this information, the shipper would be able to properly determine whether the package was suitable for the material and for air transport. Based on the foregoing, we are adopting the revised paragraph with editorial changes for clarity.

Section 178.274. Based on oral comment submitted to HM–215D, in paragraph (j)(6) the size of the ''NOT FOR RAIL TRANSPORT'' marking is revised from 20 cm (8 inches) to no less than 10 cm (4 inches) in height. We agree with the commenter's reasoning that 8 inches is excessive for portable tanks in that it could require a decal as long as 14 feet, 3 inches.

Section 178.705. We are correcting the paragraph (c)(1)(iv)(A) wall thickness table for metal IBCs. During the typesetting process of the HM–215D final rule (66 FR 33316), the headings for the IBC types were misaligned, and we are correcting them as presented in the HM–215D NPRM (65 FR 63294) published on October 23, 2000.

Section 178.812. In § 178.812(b)(1), we are adding the words ''with the load being evenly distributed,'' consistent with the wording in § 178.812(b)(2). This text is necessary to clarify that the test must not be conducted with the load unequally applied to an individual lifting device. Although we discussed this revision in the preamble of the NPRM, the word ''evenly'' was inadvertently omitted from the regulatory text.

Part 180

Section 180.350. We are amending § 180.350 by revising the section heading from ''Applicability'' to ''Applicability and definitions'' and by adding definitions for ''Remanufactured IBCs,'' ''Repaired IBCs'' and ''Routine Maintenance of IBCs.''

Section 180.352. Two paragraphs are revised and one new paragraph is added. Paragraph (d)(1)(i) is revised to specify that a repaired IBC must be retested and inspected in accordance with the applicable requirements in this section. Paragraph (f) is revised to require that a record of such tests performed on repaired IBCs must be kept by the IBC owner or lessee. Two commenters, DGAC and COSTHA, noted that with the proposed revision of paragraph (f), a portion of the existing text was omitted from the regulatory text. The unintentionally omitted text, which addresses record retention, is included in this final rule. In addition, as proposed, a new paragraph (d)(1)(iv) is added to specify a requirement for marking repaired IBCs. One commenter requested that we incorporate a provision from the UN Model Regulations to specify that tests performed in conjunction with repairs may be used to satisfy periodic testing requirements. Because the HMR currently does not prohibit tests in conjunction with repairs from being used to satisfy the periodic testing requirements, we do not believe this amendment is necessary. Several commenters asked that we include a marking requirement consistent with the UN Recommendations that applies to the routine maintenance of IBCs. Such a marking was not proposed in the NPRM and inclusion of such a requirement in the HMR is beyond the scope of this final rule.

Section 180.605. Paragraph (k) is revised to restore the inadvertently omitted inspection and test marking requirements for Specification DOT 51, 56, 57 and 60 portable tanks. The text, which was previously located in § 173.32, was omitted during the process of consolidating certain requirements and moving them to part 180 in the final rule, HM–215D. For the height of the marking when displayed on the portable tank, we are also revising the ''0.5 inches'' conversion for 12 mm to ''0.47'' inches consistent with § 178.3.

IV. Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866. However, this final rule was informally reviewed by the Office of Management and Budget. This final rule is not considered a significant rule under the Regulatory Policies and Procedures of the Department of Transportation [44 FR 11034]. Benefits resulting from the adoption of the amendments in this final rule include enhanced transportation safety resulting from the consistent domestic and international hazard communications requirements, and continued access to foreign markets by domestic shippers of hazardous materials. This rulemaking applies to offerors and carriers of hazardous materials, such as chemical manufacturers, chemical users and suppliers, packaging manufacturers, distributors, battery manufacturers, and radiopharmaceutical companies.

The majority of amendments in this final rule should result in cost savings and ease the regulatory compliance burden for shippers engaged in domestic and international commerce, including trans-border shipments within North America. For example, cost savings will be realized by shippers and carriers as a result of the following:

- Eliminating the differences between proper shipping names, UN number assignments and hazard classification, including subsidiary hazards, between the HMR and international regulations. As a result of these changes, shippers and carriers would not have to re-mark or repackage hazardous materials that are offered in both domestic and international transportation.
- Providing certain exceptions including a placarding exception for sulfur and molten sulfur when the UN number is displayed on bulk packagings, and providing a packaging exception for large, hard-cased robust lithium batteries.

We are authorizing a delayed effective date and a one-year transition period to allow for training of employees and to ease any burden on entities affected by the amendments.

In addition, we recognize that there may be costs associated with two of the shipping paper amendments and we are providing extended compliance dates to minimize any costs associated with those amendments. We are authorizing an extended compliance date, until October 1, 2007, for the amendment requiring the types and numbers of packaging(s) (§ 172.202(a)(5)) to be entered on shipping papers. We are authorizing, until October 1, 2005, an extended transition period for the amendments requiring the subsidiary hazard class or division number to be entered on shipping papers (§ 172.202(a)(2)). We are also providing an extended compliance date of October 1, 2007, for package, marking and shipping paper requirements requiring replacement of the word ''inhibited'' with the word ''stabilized,'' and until October 1, 2005 for the proper shipping names affected by the removal of the word ''compressed.''

Many companies involved in domestic, as well as international operations, will realize economic benefits as a result of the adoption of amendments in this rulemaking. If the changes are not adopted, U.S. companies will be at an economic disadvantage by being forced to comply with a dual system of regulations. The total net increase in costs to businesses in implementing this rulemaking is considered to be minimal and a regulatory evaluation is available for review in the Docket.

B. Executive Order 13132

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 (''Federalism''). This rulemaking preempts State, local and Indian tribe requirements but does not propose any regulation that has substantial direct effects on the States, the relationship between the national government and the States, or the distribution of power and responsibilities among the various levels of government. Therefore, the consultation and funding requirements of Executive Order 13132 do not apply.

The Federal hazardous material transportation law, 49 U.S.C. 5101–5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

(1) The designation, description, and classification of hazardous materials;

(2) The packing, repacking, handling, labeling, marking, and placarding of hazardous materials;

(3) The preparation, execution, and use of shipping documents related to hazardous materials and requirements related to the number, contents, and placement of those documents;

(4) The written notification, recording, and reporting of the unintentional release in transportation of hazardous; or

(5) The design, manufacture, fabrication, marking, maintenance, recondition, repair, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This final rule addresses covered subject items (1), (2), (3), and (5) above

and would preempt State, local, and Indian tribe requirements not meeting the ''substantively the same'' standard. This final rule is necessary to incorporate changes adopted in international standards, effective January 1, 2003. If the changes in this final rule were not adopted in the HMR, U.S. companies, including numerous small entities competing in foreign markets, would be at an economic disadvantage. These companies would be forced to comply with two systems of regulations. The changes in this rulemaking are intended to avoid this result. Federal hazardous materials transportation law provides at section 5125(b)(2) that, if DOT issues a regulation concerning any of the covered subjects, DOT must determine and publish in the **Federal Register** the effective date of Federal preemption. The effective date may not be earlier than the 90th day following the date of issuance of this final rule and not later than two years after the date of issuance. The effective date of Federal preemption is October 29, 2003.

C. Executive Order 13175

This final rule was analyzed in accordance with the principles and criteria contained in Executive Order 13175 (''Consultation and Coordination with Indian Tribal Governments''). Because this final rule does not have tribal implications, does not impose substantial direct compliance costs, and is required by statute, the funding and consultation requirements of Executive Order 13175 do not apply.

D. Regulatory Flexibility Act

The Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*) requires an agency to review regulations to assess their impact on small entities, unless the agency determines that a rule is not expected to have a significant impact on a substantial number of small entities. This final rule would serve to facilitate the transportation of hazardous materials in international commerce by providing consistency with international standards. This final rule applies to offerors and carriers of hazardous materials, some of whom are small entities, such as chemical users and suppliers, packaging manufacturers, distributors, and battery manufacturers. As discussed above, under *Executive Order 12866,* the majority of amendments in this final rule should result in cost savings and ease the regulatory compliance burden for shippers engaged in domestic and international commerce, including trans-border shipments within North America.

Many companies will realize economic benefits as a result of the amendments. If the changes in this final rule were not adopted, U.S. companies, including small entities competing in foreign markets, will be forced to comply with two systems of regulations to their economic disadvantage. Therefore, I certify that these amendments will not, if promulgated, have a significant economic impact on a substantial number of small entities.

This final rule has been developed in accordance with Executive Order 13272 (''Proper Consideration of Small Entities in Agency Rulemaking'') and DOT's procedures and policies to promote compliance with the Regulatory Flexibility Act to ensure that potential impacts of draft rules on small entities are properly considered.

E. Paperwork Reduction Act

Information collection and recordkeeping requirements contained in this final rule were submitted to the Office of Management and Budget (OMB) for approval under the provisions of the Paperwork Reduction Act of 1995, Section 1320.8(d). Title 5, Code of Federal Regulations requires us to provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. Under the Paperwork Reduction Act, no person is required to an information collection unless it has been approved by OMB and displays a valid OMB control number.

The new information collection requirements in this rule requiring additional shipping paper documentation, was submitted to OMB for review and approval on June 24, 2003. OMB approved this new information collection under OMB No. 2137–0613, ''Subsidiary Hazard Class and Number/Type of Packagings'' on June 25, 2003 until June 30, 2006. This new information collection, OMB Control Number 2137–0613, requiring the subsidiary hazard class or division number and number and type of packagings to be included on shipping papers increased the information collection burden. RSPA currently has an approved information collection under OMB Control Number 2137–0557, ''Approvals for Hazardous Materials'' with 18,405 burden hours and $415,237.40. There were minor editorial revisions for section designations with no change in the burden for OMB Control Number 2137–0557 under this rule. OMB approved this information collection request under OMB No. 2137–0557, ''Approvals for Hazardous Materials'' as proposed under this rule on December 20, 2002, until December 31, 2005.

OMB approved this information collection request under OMB No. 2137–0613, ''Subsidiary Hazard Class and Number/Type of Packagings'' as adopted under this rule on June 25, 2003, until June 30, 2006. We estimated total information collection and recordkeeping burden resulting from additional information required on shipping papers under the following new information collection to be:

''Subsidiary Hazard Class & Number/Type of Packagings''

OMB No. 2137–0613.
Total Annual Number of Respondents: 250,000.
Total Annual Responses: 6,337,500.
Total Annual Burden Hours: 17,604.
Total Annual Burden Cost: $216,705.
Total First Year Start Up Burden Hours: 45,705.
Total First Year Annual Start Up Cost: $1,115,992.

OMB approved the editorial changes under this rule with no increase in burden for OMB No. 2137–0557, ''Approvals for Hazardous Materials.'' The total information collection and recordkeeping burden is estimated as follows:

''Approvals for Hazardous Materials''

OMB Number: 2137–0557.
Total Annual Number of Respondents: 3,523.
Total Annual Responses: 3,874.8.
Total Annual Burden Hours: 18,405.
Total Annual Burden Cost: $415,237.40.

Requests for a copy of this information collection should be directed to Deborah Boothe or T. Glenn Foster, Office of Hazardous Materials Standards (DHM–10), Research and Special Programs Administration, Room 8422, 400 Seventh Street, SW., Washington, DC 20590–0001, Telephone (202) 366–8553.

F. Regulation Identifier Number (RIN)

A regulation identifier number (RIN) is assigned to each regulatory action listed in the Unified Agenda of Federal Regulations. The Regulatory Information Service Center publishes the Unified Agenda in April and October of each year. The RIN contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

G. Unfunded Mandates Reform Act

This final rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of $100

million or more to either State, local or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

H. Environmental Assessment

The National Environmental Policy Act of 1969 (NEPA) requires Federal agencies to consider the consequences of major Federal actions and prepare a detailed statement on actions significantly affecting the quality of the human environment. We developed an assessment to determine the effects of these revisions on the environment and whether a more comprehensive environmental impact statement may be required. Our findings conclude that there are no significant environmental impacts associated with this rule. Consistency in the regulations for the transportation of hazardous materials aids in the shipper's understanding of what is required and permits shippers to more easily comply with safety regulations and avoid the potential for environmental damage or contamination. An environmental assessment is available in the public docket.

List of Subjects

49 CFR Part 171

Exports, Hazardous materials transportation, Hazardous waste, Imports, Incorporation by reference, Reporting and recordkeeping requirements.

49 CFR Part 172

Education, Hazardous materials transportation, Hazardous waste, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 173

Hazardous materials transportation, Packaging and containers, Radioactive materials, Reporting and recordkeeping requirements, Uranium.

49 CFR Part 175

Air carriers, Hazardous materials transportation, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 176

Hazardous materials transportation, Maritime carriers, Radioactive materials, Reporting and recordkeeping requirements.

49 CFR Part 178

Hazardous materials transportation, Motor vehicle safety, Packaging and containers, Reporting and recordkeeping requirements.

49 CFR Part 180

Hazardous materials transportation, Motor carriers, Motor vehicle safety, Packaging and containers, Railroad safety, Reporting and recordkeeping requirements.

■ In consideration of the foregoing, 49 CFR Chapter I is amended as follows:

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

■ 1. The authority citation for part 171 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 2. In § 171.6, in paragraph (b)(2), the Table is amended by adding a new entry in numerical order to read as follows:

§ 171.6 Control numbers under the Paperwork Reduction Act.

* * * * *

(b) * * *

(2) * * *

Current OMB control No.	Title	Title 49 CFR part or section where identified and described
*	*	*
2137–0613	Subsidiary Hazard Class and Number/Type of Packagings	§§ 172.202, 172.203

■ 3. In § 171.7, in the paragraph (a)(3) table, under the entry ''International Maritime Organization'', a new entry is added in alphabetical order to read as follows:

§ 171.7 Reference material.

(a) * * *

(3) *Table of material incorporated by reference.* * * *

Source and name of material	49 CFR reference
*	*
International Maritime Organization,	
*	*
International Convention for the Safety of Life at Sea, (SOLAS) Amendments 2000, Chapter II–2/Regulation 19, 2001.	176.63
*	*

* * * * *

■ 4. In § 171.8, in the definition ''Large packaging'', in paragraph (5), the wording ''UN Recommendations'' is removed and ''UN Recommendations, Chapter 6.6 (incorporated by reference; see § 171.7)'' is added in its place.

■ 5. In § 171.11, paragraphs (c), (d)(5) and (d)(17) are revised to read as follows:

§ 171.11 Use of ICAO Technical Instructions.

* * * * *

(c) Is not a forbidden material or package according to § 173.21 of this subchapter; is not a forbidden material as designated in Column (3) of the § 172.101 Table of this subchapter; and is not forbidden by Column 9(A) of the § 172.101 Table of this subchapter when transported on passenger aircraft, or is not forbidden by Column 9(B) of the § 172.101 Table of this subchapter when transported by cargo aircraft.

(d) * * *

(5) For air bag inflators, air bag modules, or seat-belt pretensioners, the shipping paper description must

conform to the requirements of § 173.166(c) of this subchapter.

* * * * *

(17) A self-reactive substance that is not identified by technical name in the Self-reactive Materials Table in § 173.224(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.124(a)(2)(iii) of this subchapter. An organic peroxide that is not identified by a technical name in the Organic Peroxide Table in § 173.225(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.128(d) of this subchapter.

■ 6. In § 171.12, paragraphs (b)(3), (b)(19) and (b)(20) are revised to read as follows:

§ 171.12 Import and export shipments.

* * * * *

(b) * * *

(3) A material that is designated as a hazardous material under this subchapter, but is not subject to the requirements of the IMDG Code (see § 171.12 of this subchapter) may not be transported under the provisions of this section and is subject to the requirements of this subchapter. Examples of such materials include flammable gas powered vehicles and combustible liquids.

* * * * *

(19) For air bag inflators, air bag modules, or seat-belt pretensioners, the shipping paper description must conform to the requirements of § 173.166(c) of this subchapter.

(20) A self-reactive substance that is not identified by technical name in the Self-reactive Materials Table in § 173.224(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.124(a)(2)(iii) of this subchapter. An organic peroxide that is not identified by a technical name in the Organic Peroxide Table in § 173.225(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.128(d) of this subchapter.

* * * * *

■ 7. In § 171.12a, paragraph (b)(18) is revised to read as follows:

§ 171.12a Canadian shipments and packagings.

* * * * *

(b) * * *

(18) A self-reactive substance that is not identified by a technical name in the Self-reactive Materials Table in § 173.224(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.124(a)(2)(iii) of this subchapter. An organic peroxide that is not identified by a technical name in the Organic Peroxide Table in § 173.225(b) of this subchapter must be approved by the Associate Administrator in accordance with the requirements of § 173.128(d) of this subchapter.

* * * * *

■ 8. In § 171.14, paragraphs (d) introductory text, (d)(1), (d)(2) introductory text, (d)(4) and (d)(5) are revised, and paragraphs (d)(6), (d)(7) and (d)(8) are added to read as follows:

§ 171.14 Transitional provisions for implementing certain requirements.

* * * * *

(d) A final rule published in the **Federal Register** on July 31, 2003, effective October 1, 2003, resulted in revisions to this subchapter. During the transition period, until October 1, 2004, as provided in paragraph (d)(1) of this section, a person may elect to comply with either the applicable requirements of this subchapter in effect on September 30, 2003, or the requirements published in the July 31, 2003 final rule.

(1) *Transition dates.* The effective date of the final rule published on July 31, 2003 is October 1, 2003. Delayed compliance is authorized until October 1, 2004. Unless otherwise specified, on and after October 1, 2004, all applicable regulatory requirements adopted in the final rule in effect on October 1, 2003 must be met.

(2) *Intermixing old and new requirements.* Marking, labeling, placarding, and shipping paper descriptions must conform to either the old requirements of this subchapter in effect on September 30, 2003, or the new requirements of this subchapter in this final rule without intermixing communication elements, except that intermixing is permitted during the applicable transition period for packaging, hazard communication, and handling provisions, as follows:

* * * * *

(4) Until January 1, 2010, a hazardous material may be transported in an IM, IMO, or DOT Specification 51 portable tank in accordance with the T Codes (Special Provisions) assigned to a hazardous material in Column (7) of the § 172.101 Table in effect on September 30, 2001.

(5) Proper shipping names that included the word ''inhibited'' prior to the June 21, 2001 final rule in effect on October 1, 2001 are authorized on packagings and shipping papers in place of the word ''stabilized'' until October 1, 2007. Proper shipping names that included the word ''compressed'' prior to the final rule published on July 31, 2003 and effective on October 1, 2003 may continue to be shown on packagings and shipping papers until October 1, 2007.

(6) The shipping paper requirement for total quantity indication in § 172.202(a)(6), that was in effect on September 30, 2003, is authorized until October 1, 2007.

(7) Except for transport by vessel, the non-mandatory shipping paper provision to include the subsidiary hazard class or division number in accordance with § 172.202(a)(2), in effect on September 30, 2003, is authorized until October 1, 2005.

(8) Until October 1, 2005, proper shipping names that did not identify specific isomers by numbers or letters preceding the chemical name prior to the final rule published on July 31, 2003 and effective on October 1, 2003, may continue to be marked on packagings and are authorized on shipping papers in place of the proper shipping names revised in the July 31, 2003 final rule.

* * * * *

PART 172—HAZARDOUS MATERIALS TABLE, SPECIAL PROVISIONS, HAZARDOUS MATERIALS COMMUNICATIONS, EMERGENCY RESPONSE INFORMATION, AND TRAINING REQUIREMENTS

■ 9. The authority citation for part 172 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 10. In § 172.101, the following amendments are made:

■ a. paragraph (c)(15) is revised;

■ b. in the Hazardous Materials Table, entries are removed, as set forth below;

■ c. in the Hazardous Materials Table, entries are added, as set forth below; and

■ d. in the Hazardous Materials Table, entries are revised, as set forth below:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

(c) * * *

(15) Unless a hydrate is specifically listed in the Table, a proper shipping name for the equivalent anhydrous substance may be used, if the hydrate meets the same hazard class or division, subsidiary risk(s) and packing group.

* * * * *

§ 172.101.—HAZARDOUS MATERIALS TABLE

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	Remove:												
	*	*		*		*	*		*		*		
	Air bag inflators, compressed gas *or* Air bag modules, combressed gas *or* Seat-belt pretensioners, compressed gas.	2.2	UN3353		2.2	133	166	166	166	75 kg	150 kg	A	
	Air bag inflators, *pyrotechnic or* Air bag modules, *pyrotechnic or* Seat-belt pretensioner, *pyrotechnic*.	1.4G	UN0503	II	1.4G		166	166	166	Forbidden	75 kg	02	24E
	Air bag inflators, *pyrotechnic or* Air bag modules, *pyrotechnic or* Seat-belt pretensioner, *pyrotechnic*.	9	UN3268	III	9		166	166	166	25 kg	100 kg	A	
D	Ammonium nitrate fertilizers	5.1	NA2072	III	5.1	7, IB8	152	213	240	25 kg	100 kg	B	48, 59, 60, 117
	Ammonium nitrate fertilizers; *uniform non-segregating mixtures of ammonium nitrate with added matter which is inorganic and chemically inert towards ammonium nitrate, with not less than 90 percent ammonium nitrate and not more than 0.2 percent combustible material (including organic material calculated as carbon), or with more than 70 percent but less than 90 percent ammonium nitrate and not more than 0.4 percent total combustible material*.	5.1	UN2067	III	5.1	52, IB8, IP3	152	213	240	25 kg	100 kg	B	48, 59, 60, 117
A W	Ammonium nitrate fertilizers: *uniform non-segregating mixtures of nitrogen/phosphate or nitrogen/postash types or complete fertilizers of nitrogen/phosphate/postash type, with not more than 70 percent ammonium nitrate and not more than 0.4 percent total added combustible material or with not more than 45 percent ammonium nitrate with unrestricted combustible material*.	9	UN2071	III	9	132,IB8	155	213	240	200 kg	200 kg	A	
	Ammonium nitrate mixed fertilizers	5.1	NA2069	III	5.1	10, IB8	152	213	240	25 kg	100 kg	B	48, 59, 60, 117
	Ammonium nitrate, *with not more than 0.2 percent of combustible substances, including any organic substance calculated as carbon, to the exclusion of any other added substance*.	5.1	UN1942	III	5.1	A1, A29, IB8, IP3.	152	213	240	25 kg	100 kg	A	48, 59, 60, 116

	Boron trifluoride, compressed	2.3	UN1008		2.3	2, B9, B14	None	302	314, 315.	Forbidden	Forbidden	D	40
	Calcium hypochlorite, hydrated *or* Calcium hypochlorite, hydrated mixtures, *with not less than 5.5 percent but not more than 10 percent water*.	5.1	UN2880	II	5.1	IB8, IP2, IP4, W9.	152	212	240	5 kg	25 kg	D	4, 5, 25, 48, 56, 58, 69
	Carbonyl fluoride, compressed	2.3	UN2417		2.3, 8	2	None	302	None	Forbidden	Forbidden	D	40
+	Chlorodinitrobenzenes	6.1	UN1577	II	6.1	IB8, IP2, IP4, T7, TP2.	None	212	242	25 kg	100 kg	A	91
	Cigar and cigarette lighters, charged with fuel, see Lighters for cigars, cigarettes, *etc*												
	Cresols	6.1	UN2076	II	6.1, 8	IB8, IP2, IP4, T7, TP2.	None	202	243	1 L	30 L	B	
	Diborane, compressed	2.3	UN1911		2.3, 2.1.	1	None	302	None	Forbidden	Forbidden	D	40, 57
	Diethylamino-propylamine	3	UN2684	III	3, 8	B1, IB3, T4, TP1.	150	203	242	5 L	60 L	A	
	Dimethylcyclo-hexylamine	8	UN2264	II	8, 3	B2, IB2, T7, TP2.	154	202	243	1 L	30 L	A	40
	Ethyl methacrylate	3	UN2277	II	3	IB2, T4, TP1	150	202	242	5 L	60 L	B	
	Ethylbutyl acetate	3	UN1177	III	3	B1, IB3, T2, TP1.	150	203	242	60 L	220 L	A	
	Ethylene, compressed	2.1	UN1962		2.1		306	304	302	Forbidden	150 kg	E	40
	Hexafluoroethane, compressed *or* Refrigerant gas R 116.	2.2	UN2193		2.2		306	304	314, 315..	75 kg	150 kg	A	
	Hydrazine, anhydrous *or* Hydrazine aqueous solutions *with more than 64 percent hydrazine, by mass*.	8	UN2029	I	8, 3, 6.1..	A3, A6, A7, A10, B7, B16, B53.	None	201	243	Forbidden	2.5 L	D	21, 40, 42, 100
	Hydrazine hydrate *or* Hydrazine aqueous solutions, *with not less than 37 percent but not more than 64 percent hydrazine, by mass*.	8	UN2030	II	8, 6.1	B16, B53, IB2, T7, TP2, TP13.	None	202	243	Forbidden	30 L	D	40, 42, 82
	Lighters *or* Lighter refills *cigarettes, containing flammable gas*.	2.1	UN1057		2.1	N10	None	21, 308	None	1 kg	15 kg	B	40
	Lithium hydroxide, monohydrate *or* Lithium hydroxide, solid.	8	UN2680	II	8	IB8, IP2, IP4	154	212	240	15 kg	50 kg	A	
	Nitrogen trifluoride, compressed	2.2	UN2451		2.2, 5.1		None	302	None	75 kg	150 kg	D	40
	Phosphoric acid, *liquid or solid*	8	UN1805	III	8	A7, IB3, IP3, N34, T4, TP1.	154	203	241	5 L	60 L	A	
	Phosphorus pentafluoride, compressed.	2.3	UN2198		2.3, 8	2, B9, B14	None	302, 304..	314, 315..	Forbidden	Forbidden	D	40
	Propyl chloride	3	UN1278	II	3	IB2, IP8, N34, T7, TP2.	None	202	242	Forbidden	60 L	E	
	Refrigerating machines, *containing non-flammable, non-toxic, liquefied gas or ammonia solution (UN2672)*.	2.2	UN2857		2.2	A53	306, 307..	306	306, 307..	450 kg	450 kg	A	
	Silane, compressed	2.1	UN2203		2.1		None	302	None	Forbidden	Forbidden	E	40, 57, 104
	Silicon tetrafluoride, compressed	2.3	UN1859		2.3, 8	2	None	302	None	Forbidden	Forbidden	D	40
	Tetrachloroethane	6.1	UN1702	II	6.1	IB2, N36, T7, TP2.	None	202	243	5 L	60 L	A	40
	Tetrafluoromethane, compressed *or* Refrigerant gas R 14.	2.2	UN1982		2.2		None	302	None	75 kg	150 kg	A	
D	Uranium nitrate hexahydrate solution	7	UN2980		7, 8		421, 427.	415, 416, 417.	415, 416, 417.			D	95
	Xenon, compressed	2.2	UN2036		2.2		306	302	None	75 kg	150 kg	A	
	Xylidines, solution	6.1	UN1711	II	6.1	IB2, T7, TP2	None	202	243	5 L	60 L	A	

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	Add: *Accumulators, pressurized, pneumatic or hydraulic (containing non-flammable gas) see* Articles pressurized, pneumatic *or* hydraulic (*containing non-flammable gas)*												
	*	*		*		*	*		*		*		
I	Air bag inflators, *or* Air bag modules, *or* Seat-belt pretensioners.	1.4G	UN0503	II	1.4G	161	None	62	None	Forbidden	75kg	02	
	Air bag inflators, *or* Air bag modules, *or* Seat-belt pretensioners.	9	UN3268	III	9	160	166	166	166	25 kg	100	A	
	*	*		*		*	*		*		*		
	Ammonium nitrate emulsion *or* Ammonium nitrate suspension *or* Ammonium nitrate gel, *intermediate for blasting explosives*.	5.1	UN3375	II	5.1	52, 147	None	214	214	Forbidden	Forbidden	D	48, 59, 60, 124
	*	*		*		*	*		*		*		
	Ammonium nitrate based fertilizer	5.1	UN2067	III	5.1	52, 150, IB8, IP3.	152	213	240	25 kg	100 kg	B	48, 59, 60, 117
AW	Ammonium nitrate based fertilizer	9	UN2071	III	9	132, IB8	155	213	240	200 kg	200 kg	A	
	*	*		*		*	*		*		*		
	Ammonium nitrate, *with not more than 0.2% total combustible material, including any organic substance, calculated as carbon to the exclusion of any other added substance*.	5.1	UN1942	III	5.1	A1, A29, IB8, IP3.	152	213	240	25 kg	100 kg	A	48, 59, 60, 116
	*	*		*		*	*		*		*		
	Boron trifluoride	2.3	UN1008		2.3	2, B9, B14	None	302	314, 315.	Forbidden	Forbidden	D	40
	*	*		*		*	*		*		*		
	Calcium hypochlorite, hydrated *or* Calcium hypochlorite, hydrated mixtures, *with not less than 5.5 percent but not more than 16 percent water*.	5.1	UN2880	II	5.1	IB8, IP2, IP4, W9.	152	212	240	5 kg	25 kg	D	4, 5, 25, 48, 56, 58, 69
	*	*		*		*	*		*		*		
	Carbonyl fluoride	2.3	UN2417		2.3, 8	2	None	302	None	Forbidden	Forbidden	D	40
	*	*		*		*	*		*		*		
+	Chlorodinitrobenzenes, liquid	6.1	UN1577	II	6.1	IB2, T11,TP2, TP27.	None	202	243	5 L	60 L	B	91
+	Chlorodinitrobenzenes, solid	6.1	UN1577	II	6.1	IB8, IP4, T7, TP2.	None	212	242	25 kg	100 kg	A	91

	*	*		*		*	*		*		*			
	1-Chloropropane	3	UN1278	II	3	IB2, N34, T7, TP2.	None	202	242	Forbidden	60 L	E		
	*	*		*		*	*		*		*			
	Chlorosilanes, toxic, corrosive, n.o.s.	6.1	UN3361	II	6.1, 8	IB1, T11, TP2, TP13.	None	202	243	1 L	30 L	C	40	
	Chlorosilanes, toxic, corrosive, flammable, n.o.s..	6.1	UN3362	II	6.1, 3, 8	IB1, T11, TP2, TP13.	None	202	243	1 L	30 L	C	40, 125	
	*	*		*		*	*		*		*			
	Cigar and cigarette lighters, charged with fuel, see Lighters *or* Lighter refills *containing flammable gas*													
	*	*		*		*	*		*		*			
	Cresols, liquid	6.1	UN2076	II	6.1, 8	IB8, IP2, IP4, T7, TP2.	None	202	243	1 L	30 L	B		
	Cresols, solid	6.1	UN2076	II	6.1, 8	IB8, IP2, IP4, T7, TP2.	None	202	243	1 L	30 L	B		
	*	*		*		*	*		*		*			
	Diborane	2.3	UN1911	2.3	2.1	1	None	302	None	Forbidden	Forbidden	D	40, 57	
	*	*		*		*	*		*		*			
	3-Diethylamino-propylamine	3	UN2684	III	3, 8	B1, IB3, T4, TP1.	150	203	242	5 L	60 L	A		
	*	*		*		*	*		*		*			
	N,N-Dimethylcyclo-hexylamine	8	UN2264	II	8, 3	B2, IB2, T7, TP2.	154	202	243	1 L	30 L	A	40	
	*	*		*		*	*		*		*			
	Ethyl methacrylate, stabilized	3	UN2277	II	3	IB2, T4, TP1	150	202	242	5 L	60 L	B		
	*	*		*		*	*		*		*			
	2-Ethylbutyl acetate	3	UN1177	III	3	B1, IB3, T2, TP1.	150	203	242	60 L	220 L	A		
	*	*		*		*	*		*		*			
	Ethylene	2.1	UN1962		2.1	306	304	302	Forbidden.	150kg	E	40		
	*	*		*		*	*		*		*			
	Ethylene glycol diethyl ether	3	UN1153	II	3	IB2, T4, TP1	150	202	242	5 L	60 L	A		
	*	*		*		*	*		*		*			
A, I, W	Fibers, animal *or* Fibers, vegetable *burnt, wet or damp*.	4.2	UN1372	III	4.2		151	213	240	Forbidden	Forbidden	A		
	*	*		*		*	*		*		*			
I, W	Fibers, vegetable, dry	4.1	UN3360	III	4.1	137	151	213	240	No limit	No limit	A		
	*	*		*		*	*		*		*			
	Hexafluoroethane, *or* Refrigerant gas R116.	2.2	UN2193		2.2		306	304	314, 315.	75 kg	150	A		

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	*	*		*		*	*		*		*		
	Hydrazine, anhydrous	8	UN2029	I	8, 3, 6.1	A3, A6, A7, A10, B7, B16, B53.	None	201	243	Forbidden	2.5 L	D	40, 125
	*	*		*		*	*		*		*		
	Hydrazine aqueous solution, *with more than 37% hydrazine, by mass*.	8	UN2030	I	8, 6.1	151	None	201	243	Forbidden	2.5 L	D	40
				II	8, 6.1		None	202	243	Forbidden	30 L	D	40
				III	8, 6.1		154	203	241	5 L	60 L	D	40
	*	*		*		*	*		*		*		
	Hydrobromic acid, with more than 4 percent hydrobromic acid 9.	8	UN1788										
	*	*		*		*	*		*		*		
	Lighters *or* Lighter refills *containing flammable gas*.	2.1	UN1057		2.1	N10	None	21, 308	None	1 kg	15 kg	B	40
	*	*		*		*	*		*		*		
	Lithium hydroxide	8	UN2680	II	8	IB8, IP2, IP4	154	212	240	15 kg	50 kg	A	
	*	*		*		*	*		*		*		
	2-Methylbutanal	3	UN3371	II	3	IB2, T4, TP1	150	202	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
	Nitrogen trifluoride	2.2	UN2451		2.2, 5.1		None	302	None	75 kg	150 kg	D	40
	*	*		*		*	*		*		*		
	4-Nitrophenylhydrazine, *with not less than 30% water, by mass*.	4.1	UN3376	I	4.1	162, A8, A19, A20, N41.	None	211	None	Forbidden	Forbidden	E	36
	*	*		*		*	*		*		*		
G	Organometallic compound, solid, water-reactive, flammable, n.o.s..	4.3	UN3372	I	4.3, 4.1	IB4, N40	None	211	242	Forbidden	15 kg	E	40
				II	4.3, 4.1	IB4	151	212	242	15 kg	50 kg	E	40
				III	4.3, 4.1	IB6	151	213	241	25 kg	100 kg	E	40
	*	*		*		*	*		*		*		
	Phosphoric acid, liquid	8	UN1805	III	8	A7, IB3, IP3, N34, T4, TP1.	154	203	241	5 L	60 L	A	
	Phosphoric acid, solid	8	UN1805	III	8	IB8, IP3, T3, TP1.	154	213	240	25 kg	100 kg	A	
	*	*		*		*	*		*		*		
	Phosphorus pentafluoride	2.3	UN2198		2.3, 8	2, B9, B14	None	302, 304.	314, 315.	Forbidden	Forbidden	D	40

	*	*		*		*	*		*		*			
	Propyl chloride see 1-Chloropropane.													
	*	*		*		*	*		*		*			
A, W	Rags, oily	4.2	UN1856	III	4.2		151	213	240	Forbidden	Forbidden	A	
	*	*		*		*	*		*		*			
	Refrigerating machines, *containing non-flammable, non-toxic, liquefied or compressed gas or ammonia solution (UN2672)*.	2.2	UN2857		2.2	A53	306, 307.	306	306, 307.	450 kg	450 kg	A	
	*	*		*		*	*		*		*			
	Rubber scrap *or* Rubber shoddy, *powdered or granulated, not exceeding 840 microns and rubber content exceeding 45%*.	4.1	UN1345	II	4.1	IB8, IP2, IP4	151	212	240	15 kg	50 kg	A	
	*	*		*		*	*		*		*			
	Silane	2.1	UN2203		2.1		None	302	None	Forbidden	Forbidden	E	40, 57, 104
	*	*		*		*	*		*		*			
	Silicon tetrafluoride	2.3	UN1859		2.3, 8	2	None	302	None	Forbidden	Forbidden	D	40
	*	*		*		*	*		*		*			
	Sodium dinitro-o-cresolate, wetted, *with not less than 10% water by mass*.	4.1	UN3369	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*			
	1,1,2,2-Tetrachloroethane	6.1	UN1702	II	6.1	IB2, N36, T7, TP2.	None	202	243	5 L	60 L	A	40
	*	*		*		*	*		*		*			
	Tetrafluoromethane, *or* Refrigerant gas R 14.	2.2	UN1982		2.2		None	302	None	75 kg	150 kg	A	
	*	*		*		*	*		*		*			
A, I, W	Textile waste, wet	4.2	UN1857	III	4.2		151	213	240	Forbidden	Forbidden	A	
	*	*		*		*	*		*		*			
	Trinitrobenzene, wetted, *with not less than 10% water by mass*.	4.1	UN3367	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*			
	Trinitrobenzoic acid, wetted, *with not less than 10% water by mass*.	4.1	UN3368	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*			
	Trinitrochlorobenzene (picryl chloride), wetted, *with not less than 10% water by mass*.	4.1	UN3365	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*			
	Trinitrophenol (picric acid), wetted, *with not less than 10% water by mass*.	4.1	UN3364	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	*	*		*		*	*		*		*		
	Trinitrotoluene (TNT), wetted, *with not less than 10% water by mass*.	4.1	UN3366	I	4.1	162, A8, A19, N41, N84.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*		
D	Uranyl nitrate hexahydrate solution	7	UN2980		7, 8		421, 427.	415, 416, 417.	415, 416 417.			D	95
	*	*		*		*	*		*		*		
	Urea nitrate, wetted, *with not less than 10% water by mass*.	4.1	UN3370	I	4.1	162, A8, A19, N41, N83.	None	211	None	0.5 kg	0.5 kg	E	36
	*	*		*		*	*		*		*		
A, I, W	Wool waste, wet	4.2	UN1387	III	4.2		151	213	240	Forbidden	Forbidden	A	
	*	*		*		*	*		*		*		
	Xenon	2.2	UN2036		2.2		306	302	None	75 kg	150 kg	A	
	*	*		*		*	*		*		*		
	Xylidines, liquid	6.1	UN1711	II	6.1	IB2, T7, TP2	None	202	243	5 L	60 L	A	
	Revise:												
	Adhesives, *containing a flammable liquid*.	3	UN1133	II	3	149, B52, IB2, T4, TP1, TP8.	150	173	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
	Aerosols, *corrosive, Packing Group II or III, (each not exceeding 1 L capacity*).	2.2	UN1950		2.2, 8	153, A34	306	None	None	75 kg	150 kg	A	48, 87, 126
	Aerosols, *flammable, (each not exceeding 1 L capacity*).	2.1	UN1950		2.1	153, N82	306	None	None	75 kg	150 kg	A	48, 87, 126
	Aerosols, flammable, n.o.s. (*engine starting fluid) (each not exceeding 1 L capacity*).	2.1	UN1950		2.1	153, N82	306	304	None	Forbidden	150 kg	A	48, 87, 126
	Aerosols, *non-flammable, (each not exceeding 1 L capacity*).	2.2	UN1950		2.2	153	306, 307.	None	None	75 kg	150 kg	A	48, 87, 126
	Aerosols, poison, *each not exceeding 1 L capacity*.	2.2	UN1950		2.2	153	306	None	None	Forbidden	Forbidden	A	48, 87, 126
	*	*		*		*	*		*		*		
	Alkylsulfuric acids	8	UN2571	II	8	B2, IB2, T8, TP2, TP12, TP13, TP28.	154	202	242	1 L	30 L	C	14

	*	*		*		*	*		*		*			
	Ammonia solutions, *relative density between 0.880 and 0.957 at 15 degrees C in water, with more than 10 percent but not more than 35 percent Ammonia*.	8	UN2672	III	8	IB3, IP8, T7, TP1.	154	203	241	5 L	60 L	A	40, 85
	*	*		*		*	*		*		*		
	Ammunition, smoke *with or without burster, expelling charge or propelling charge*.	1.2G	UN0015	II	1.2G			62	None	Forbidden	Forbidden		8E, 17E, 20E
	Ammunition, smoke *with or without burster, expelling charge or propelling charge*.	1.3G	UN0016	II	1.3G			62	None	Forbidden	Forbidden		8E, 17E, 20E
	Ammunition, smoke *with or with burster, expelling charge or propelling charge*.	1.4G	UN0303	II	1.4G			62	None	Forbidden	75 kg		7E, 8E, 14E, 15E, 17E
	* *	*		*		*	*		*		*		*
	Arsenic compounds, liquid, n.o.s *inorganic, including arsenates, n.o.s.; arsenites, n.o.s.; arsenic sulfides, n.o.s.; and organic compounds of arsenic, n.o.s.*	6.1	UN1556	I	6.1	T14, TP2, TP9, TP13, TP27.	None	201	243	1 L	30 L	B	40
				II	6.1	IB2, T11, TP2, TP13, TP27.	None	202	243	5 L	60 L	B	40
				III	6.1	IB3, T7, TP2, TP28.	153	203	241	60 L	220 L	B	40
	* *	*		*		*	*		*		*		*
D	Asbestos	9	NA2212	III	9	156, IB8, IP2, IP4.	155	216	240	200 kg	200 kg	A	34, 40
	* *	*		*		*	*		*		*		*
	Barium azide, wetted *with not less than 50 percent water, by mass*.	4.1	UN1571	I	4.1, 6.1	162, A2	None	182	None	Forbidden	0.5 kg	D	28
	* *	*		*		*	*		*		*		*
	Battery fluid, alkali	8	UN2797	II	8	B2, IB2, N6, T7, TP2, TP28.	154	202	242	1 L	30 L	A	26
	* *	*		*		*	*		*		*		*
I	Blue asbestos *(Crocidolite* or Brown asbestos *(amosite, mysorite)*.	9	UN2212	II	9	156, IB8, IP2, IP4.	155	216	240	Forbidden	Forbidden	A	34, 40
	* *	*		*		*	*		*		*		*
	5-tert-Butyl-2,4,6-trinitro-m-xylene *or* Musk xylene.	4.1	UN2956	III	4.1	159	None	223	None	Forbidden	Forbidden	D	12, 25, 48, 127
	* *	*		*		*	*		*		*		*
	Chemical kits	9	UN3316		9	15	161	161	None	10 kg	10 kg	A	
	* *	*		*		*	*		*		*		*
	Chloroacetic acid, molten	6.1	UN3250	II	6.1, 8	IB1, T7, TP3, TP28.	None	202	243	Forbidden	Forbidden	C	40

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	* *	*		*		*	*		*		*		*
	4-Chloro-o-toluidine hydrochloride	6.1	UN1579	III	6.1	IB8, IP3, T4, TP1.	153	213	240	100 kg	200 kg	A	
	* *	*		*		*	*		*		*		*
	Coating solution *(includes surface treatments or coatings used for industrial or other purposes such as vehicle undercoating, drum or barrel lining)*.	3	UN1139	II	3	149, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
	* *	*		*		*	*		*		*		*
	Dichlorodimethyl ether, symmetrical	6.1	UN2249	I	6.1, 3		None	201	243	Forbidden	Forbidden	D	40
	* *	*		*		*	*		*		*		*
	Dipicryl dulfide, wetted *with not less than 10 percent water, by mass*.	4.1	UN2852	I	4.1	162, A2, N41, N84.	None	211	None	Forbidden	0.5 kg	D	28
	* *	*		*		*	*		*		*		*
G	Environmentally hazardous substances, liquid, n.o.s.	9	UN3082	III	9	8, 146, IB3, T4, TP1, TP29.	155	203	241	No limit	No limit	A	
G	Environmentally hazardous substances, solid, n.o.s.	9	UN3077	III	9	8, 146, B54, IB8, N20.	155	213	240	No limit	No limit	A	
	* *	*		*		*	*		*		*		*
	Extracts, aromatic, liquid	3	UN1169	II	3	149, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
	Extracts, flavoring, liquid	3	UN1197	II	3	149, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
	First aid kits	9	UN3316		9	15	161	161	None	10 kg	10 kg	A	
W	Fish meal, stabilized *or* Fish scrap, stabilized.	9	UN2216	III		155, IB8	155	218	218	No limit	No limit	B	88, 122, 128
	Fish meal, unstabilized *or* Fish scrap, unstabilized.	4.2	UN1374	II	4.2	155, A1, A19, IB8, IP2.	None	212	241	15 kg	50 kg	B	88, 122, 128
	*	*		*		*	*		*		*		
G	Flammable liquids, n.o.s.	3	UN1993	I	3	T11, TP1, TP27	150	201	243	1 L	30 L	E	
	*	*		*		*	*		*		*		
	Hydrobromic acid, *with not more than 49 percent hydrobromic acid*.	8	UN1788	III	8	IB3, T4, TP1	154	203	241	5 L	60 L	C	8
	*	*		*		*	*		*		*		
	Hydrocarbons, liquid, n.o.s.	3	UN3295	I	3	T11, TP1, TP8, TP28.	150	201	243	1 L	30 L	E	

	*	*		*		*	*		*		*			
	Hydrogen peroxide and peroxyacetic acid mixtures, stabilized *with acids, water and not more than 5 percent peroxyacetic acid*.	5.1	UN3149	II	5.1, 8	145, A2, A3, A6, B53, IB2, IP5, T7, TP2, TP6, TP24.	None	202	243	1 L	5 L	D	25, 66, 75, 106
	*	*		*		*	*		*		*			
	Iodine pentafluoride	5.1	UN2495	I	5.1, 6.1, 8.		None	205	243	Forbidden	Forbidden	D	25, 40, 66, 90
	*	*		*		*	*		*		*			
	Isosorbide dinitrate mixture *with not less than 60 percent lactose, mannose, starch or calcium hydrogen phosphate*.	4.1	UN2907	II	4.1	IB6, IP2, N85	None	212	None	15 kg	50 kg	E	
	*	*		*		*	*		*		*			
	Lithium batteries, contained in equipment.	9	UN3091	II	9	29, A54, A55	185	185	None	5 kg	35kg	A	
	Lithium batteries packed with equipment.	9	UN3091	II	9	29, A54, A55	185	185	None	5 kg gross	35 kg gross.	A	
	Lithium battery	9	UN3090	II	9	29, A54, A55	185	185	None	5 kg gross	35 kg gross.	A	
	*	*		*		*	*		*		*			
	Medicine, liquid, toxic, n.o.s.	6.1	UN1851	II	6.1	36	153	202	243	5 L	5 L	C	40
				III	6.1	36	153	203	241	5 L	5 L	C	40
	*	*		*		*	*		*		*			
	Methacrylic Acid, stabilized	8	UN2531	II	8	IB3, T4, TP1, TP18, TP 30.	154	202	242	1 L	30 L	C	40
	*	*		*		*	*		*		*			
	Methyl bromide	2.3	UN1062		2.3	3, B14, T50, 153.	None	193	314, 315.	Forbidden	Forbidden	D	40
	*	*		*		*	*		*		*			
	Morpholine	8	UN2054	I	8, 3	T10, TP2	None	201	243	.5 L	2.5 L	A	
	*	*		*		*	*		*		*			
I	Motor fuel anti-knock mixtures	6.1	UN1649	I	6.1	14, 151, B9, B90, T14, TP2, TP13.	None	201	244	Forbidden	30 L	D	25, 40
	*	*		*		*	*		*		*			
G	Organic peroxide type F, solid, temperature controlled.	5.2	UN3120	II	5.2	IB52, T23	None	225	225	Forbidden	Forbidden	D	2
	Organochlorine pesticides, liquid, toxic, flammable, *flash point not less than 23 degrees C*.	6.1	UN2995	III	6.1, 3	B1, IB3, T7, TP2, TP28.	153	203	242	60 L	220 L	A	40
	*	*		*		*	*		*		*			
	Organophosphorus compound, toxic, flammable, n.o.s.	6.1	UN3279	I	6.1, 3	5, T14, TP2, TP13, TP27.	None	201	243	1 L 30	L	B	40

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	*	*		*		*	*		*		*		
	Paint *including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler, and liquid lacquer base*.	3	UN1263	II	3	149, B52, IB2, T4, TP1, TP8.	150	173	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
	Paint related material *including paint thinning, drying, removing, or reducing compound*.	3	UN1263	II	3	149, B52, IB2, T4, TP1, TP8.	150	173	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
	Pentaerythrite tetranitrate mixture, desensitized, solid, n.o.s. *with more than 10 percent but not more than 20 percent PETN, by mass*.	4.1	UN3344	II	4.1	118, N85	None	214	None	Forbidden	Forbidden	E	
	*	*		*		*	*		*		*		
	Perfumery products *with flammable solvents*.	3	UN1266	II	3	149, IB2, T4, TP1, TP8.	150	202	242	15 L	60 L	B	
	*	*		*		*	*		*		*		
	Phosphorus, white dry *or* Phosphorus, white, under water *or* Phosphorus white, in solution or Phosphorus yellow dry *or* Phosphorus, yellow, under water *or* Phosphorus, yellow, in solution.	4.2	UN1381	I	4.2, 6.1	B9, B26, N34, T9, TP3, TP31.	None	188	243	Forbidden	Forbidden	E	
	*	*		*		*	*		*		*		
	Piperazine	8	UN2579	III	8	IB8, IP3, T4, TP1, TP30.	154	213	240	25 kg	100	A	12
	*	*		*		*	*		*		*		
	Polyester resin	3	UN3269		3	40, 149	152	225	None	5 kg	5 kg	B	
	*	*		*		*	*		*		*		
	Potassium	4.3	UN2257	I	4.3	A19, A20, B27, IB1, IP1, N6, N34, T9, TP3, TP7, TP31.	None	211	244	Forbidden	15 kg	D	
	*	*		*		*	*		*		*		
	Potassium sodium alloys	4.3	UN1422	I	4.3	A19, B27, IB4, IP1, N34, N40, T9, TP3, TP7, TP31.	None	211	244	Forbidden	15 kg	D	

	*	*		*		*	*		*		*			
	Printing ink, *flammable or* Printing ink related material *(including printing ink thinning or reducing compound), flammable*.	3	UN1210	II	3	149, IB2, T4, TP1, TP8.	150	173	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
D	Radioactive material, fissile, n.o.s	7	UN2918		7	A56	453	417	417			A	95, 105
I	Radioactive material, low specific activity (LSA–I) *non fissile or fissile-excepted*.	7	UN2912		7	A56, T5, TP4, W7.	421, 422, 428.	427	427			A	95, 129
	*	*		*		*	*		*		*		
I	Radioactive material, low specific activity (LSA–II) *non fissile or fissile-excepted*.	7	UN3321		7	A56, T5, TP4, W7.	421, 422, 428.	427	427			A	95, 129
I	Radioactive material, low specific activity (LSA–III) *non fissile or fissile excepted*.	7	UN3322		7	A56, T5, TP4, W7.	421, 422, 428.	427	427			A	95, 129
D	Radioactive material, low specific activity, n.o.s. *or* Radioactive material, LSA, n.o.s.	7	UN2912		7	A56, T5, TP4	421, 428.	427	427			A	95, 129
D	Radioactive material, n.o.s	7	UN2982		7	A56	421, 428.	415, 416.	415, 416.			A	95
D	Radioactive material, special form, n.o.s.	7	UN2974		7	A56	421, 424.	415, 416.	415, 416.			A	95
D	Radioactive material, surface contaminated object *or* Radioactive material, SCO.	7	UN2913		7	A56	421, 424, 426.	427	427			A	95
I	Radioactive material, surface contaminated objects (SCO–I *or* SCO–II) *non fissile or fissile-excepted*.	7	UN2913		7	A56	421, 422, 428.	427	427			A	95
I	Radioactive material, transported under special arrangement, *non fissile or fissile excepted*.	7	UN2919		7	A56, 139						A	95, 105
I	Radioactive material, transported under special arrangement, fissile.	7	UN3331		7	A56, 139						A	95, 105
I	Radioactive material, Type A package, fissile *non-special form*.	7	UN3327		7	A56, W7, W8	453	417	417			A	95, 105, 131
I	Radioactive material, Type A package *non-special form, non fissile or fissile-excepted*.	7	UN2915		7	A56, W7, W8		415	415			A	95, 130
I	Radioactive material, Type A package, special form *non fissile or fissile-excepted*.	7	UN3332		7	A56, W7, W8		415, 476.	415, 476.			A	95
I	Radioactive material, Type A package, special form, fissile.	7	UN3333		7	A56, W7, W8	453	417, 476.	417, 476.			A	95, 105
I	Radioactive material, Type B(M) package, fissile.	7	UN3329		7	A56	453	417	417			A	95, 105
I	Radioactive material, Type B(M) package *non fissile or fissile-excepted*.	7	UN2917		7	A56		416	416			A	95, 105
I	Radioactive material, Type B(U) package, fissile..	7	UN3328		7	A56	453	417	417			A	95, 105
I	Radioactive material, Type B(U) package *non fissile or fissile-excepted*.	7	UN2916		A56	416	416					A	95, 105

§ 172.101.—HAZARDOUS MATERIALS TABLE—Continued

Symbols	Hazardous materials descriptions and proper shipping names	Hazard class or division	Identification numbers	PG	Label codes	Special provisions	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage	
							Exceptions	Nonbulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
I	Radioactive material, uranium hexafluoride *non fissile or fissile-excepted*.	7	UN2978		7, 8		423	420, 427.	420, 427.			A	95, 132
	Radioactive material, uranium hexafluoride, fissile.	7	UN2977		7, 8		453	417, 420.	417, 420.			A	95, 132
	* *	*		*		*	*		*		*		*
	Resin solution, *flammable*	3	UN1866	II	3	149, B52, IB2, T4, TP1, TP8.	150	173	242	5 L	60 L	B	
	* *	*		*		*	*		*		*		*
	Rubber solution	3	UN1287	II	3	149, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
	* *	*		*		*	*		*		*		*
G	Self-reactive liquid type F	4.1	UN3229	II	4.1	T23	None	114	None	10 L	25L	D	61
	* *	*		*		*	*		*		*		*
	Silver picrate, wetted *with not less than 30 percent water, by mass*.	4.1	UN1347	I	4.1	23	None	211	None	Forbidden	Forbidden	D	28, 36
	* *	*		*		*	*		*		*		*
	Sludge, acid	8	UN1906	II	8	A3, A7, B2, IB2, N34, T8, TP2, TP12, TP28.	None	202	242	Forbidden	30 L	C	14
	* *	*		*		*	*		*		*		*
	Sodium	4.3	UN1428	I	4.3	A7, A8, A19, A20, B9, B48, B68, IB4, IP1, N34, T9, TP3, TP7, TP31, TP46.	None	211	244	Forbidden	15 kg	D	
	* *	*		*		*	*		*		*		*
D	Sulfur, molten	9	NA2448	III	9	30, IB3, T1, TP3	None	213	247	Forbidden	Forbidden	C	61
I	Sulfur, molten	4.1	UN2448	III	4.1	30, IB1, T1, TP3	None	213	247	Forbidden	Forbidden	C	74
	*	*		*		*	*		*		*		
	Tars, liquid *including road asphalt and oils, bitumen and cut backs*.	3	UN1999	II	3	149, B13, IB2, T3, TP3, TP29.	150	202	242	5 L	60 L	B	
	*	*		*		*	*		*		*		
D	Thorium metal, pyrophoric	7	UN2975		7, 4.2	A56	None	418	None				95
D	Thorium nitrate, solid	7	UN2976		7, 5.1		None	419	None	Forbidden	15 kg	A	95

	*	*		*		*	*		*		*		
D	Uranium hexafluoride, *fissile excepted or non-fissile*.	7	UN2978		7, 8		423	420,, 427.	420, 427.			A	95, 132
D	Uranium hexafluoride, fissile (*with more than 1 percent U–235*).	7	UN2977		7, 8		453	417, 420.	417, 420.			A	95, 132
D	Uranium metal, pyrophoric	7	UN2979		7, 4.2	A56	None	418	None			D	95
	*	*		*		*	*		*		*		
D	Uranyl nitrate, solid	7	UN2981		7, 5.1		None	419	None	Forbidden	15 kg	A	95
	*	*		*		*	*		*		*		
	Urea nitrate, weted *with not less than 20 percent water, by mass*.	4.1	UN1357	I	4.1	23, 39, A8, A19, N41.	None	211	None	1 kg	15 kg	E	28, 36
	*	*		*		*	*		*		*		
	Vehicle, flammable gas powered	9	UN3166		9	135, 157	220	220	220	Forbidden	No limit	A	
	Vehicle, flammable liquid powered.	9	UN3166		9	135, 157	220	220	220	No limit	No limit	A	
	*	*		*		*	*		*		*		
I	White asbestos (*chrysotile, actinolite, anthophyllite, tremolite*).	9	UN2590	III	9	156, IB8, IP2, IP3.	155	216	240	200 kg	200 kg	A	34, 40
	Wood preservatives, liquid	3	UN1306	II	3	149, IB2, T4, TP1, TP8.	150	202	242	5 L	60 L	B	
	*	*		*		*	*		*		*		

■ 11. In Appendix B to § 172.101, paragraphs 4. and 5. are revised and the List of Marine Pollutants is amended by removing 5 entries, and adding 2 entries in appropriate alphabetical order to read as follows:

Appendix B to § 172.101—List of Marine Pollutants.

* * * * *

4. If a material is not listed in this appendix and meets the criteria for a marine pollutant as provided in Chapter 2.10 of the IMDG Code, ''Guidelines for the Identification of Harmful Substances in Packaged Form'' (incorporated by reference; see § 171.7 of this subchapter), the material may be transported as a marine pollutant in accordance with the applicable requirements of this subchapter.

5. If a material listed in this appendix does not meet the criteria for a marine pollutant as provided in Chapter 2.10 of the IMDG Code, ''Guidelines for the Identification of Harmful Substances in Packaged Form'' (incorporated by reference; see § 171.7 of this subchapter), it may be excepted from the requirements of this subchapter as a marine pollutant if that exception is approved by the Associate Administrator.

* * * * *

LIST OF MARINE POLLUTANTS

S, M, P (1)	(2)
[Remove:]	
	Alkylbenzenesulphonates, branched and straight chain
	Alkylphenols, liquid, n.o.s. *(including C2–C12 homologues)*
	Alkylphenols, solid, n.o.s. *(including C2–C12 homologues)*
* *	* * * * *
	Chlorophenols, liquid
	Chlorophenols, solid
[Add:]	
* *	* * * * *
	Alkybenzenesulphonates, branched and straight chain *(excluding C11–C13 straight chain or branched chain homologues)*
* *	* * * * *
	Decyl acrylate
* *	* * * * *

■ 11a. In § 172.102:

■ a. In paragraph (c)(1), Special Provisions 15, 30, 52, 130, 132 and 134 are revised; Special Provisions 7, 10 and 133 are removed; and Special Provisions 145, 146, 147, 149, 150, 151, 153, 155, 156, 157, 159, 160, 161 and 162 are added.

■ b. In paragraph (c)(2), Special Provisions A54, A55 and A56 are added.

■ c. In paragraph (c)(4), the text is revised; in Table 1, Special Provision IB3 is revised; in Table 2, the Table heading is revised, 1 entry is removed, 4 entries are added, and 1 entry is revised; and in Table 3, Special Provision IP8 is added.

■ d. In paragraph (c)(5), Special Provisions N83, N84 and N85 are added.

■ e. In paragraph (c)(7)(iii), Portable Tank Code T23 is amended by removing 2 entries, adding 4 entries, and revising 2 entries.

■ e. In paragraph (c)(7)(viii), Special Provision TP3 is revised.

The additions and revisions read as follows:

§ 172.102 Special provisions.

* * * * *

(c) * * *

(1) * * *

Code/Special Provisions

* * * * *

15 This entry applies to ''Chemical kits'' and ''First aid kits'' containing one or more compatible items of hazardous materials in boxes, cases, etc. that are used for medical, analytical, diagnostic or testing purposes. For transportation by aircraft, materials forbidden for transportation by passenger aircraft or cargo aircraft may not be included in the kits. The quantity of hazardous materials in any inner packaging must not exceed the limited quantity inner packaging limits specified for each hazardous material in the applicable limited quantity sections (§ 173.150 through § 173.155, and § 173.306) in part 173 of this subchapter. Each package must conform to the packaging requirements of subpart B of part 173 and must not exceed 30 kg (66 lbs.) gross weight. Chemical kits and first aid kits are excepted from the specification packaging requirements of this subchapter when packaged in combination packagings. Chemical kits and first aid kits are also excepted from the labeling and placarding requirements of this subchapter, except when offered for transportation or transported by air. Chemical and first aid kits may be transported in accordance with the consumer commodity and ORM exceptions in § 173.156, provided they meet all required conditions. Kits that are carried on board transport vehicles for first aid or operating purposes are not subject to the requirements of this subchapter.

* * * * *

30 Sulfur is not subject to the requirements of this subchapter if transported in a non-bulk packaging or if formed to a specific shape (for example, prills, granules, pellets, pastilles, or flakes). A bulk packaging containing sulfur is not subject to the placarding requirements of subpart F of this part, if it is marked with the appropriate identification number as required by subpart D of this part. Molten sulfur must be marked as required by § 172.325 of this subchapter.

* * * * *

52 This entry may only be used for substances that do not exhibit explosive properties of Class 1 (explosive) when tested in accordance with Test Series 1 and 2 of Class 1 (explosive) in the UN Manual of Tests and Criteria, Part I (incorporated by reference; see § 171.7 of this subchapter).

* * * * *

130 For other than a dry battery specifically covered by another entry in the § 172.101 Table, ''Batteries, dry'' are not subject to the requirements of this

subchapter when they are securely packaged and offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals) and protects against short circuits.

* * * * *

132 This entry may only be used for uniform, ammonium nitrate-based fertilizer mixtures, containing nitrogen, phosphate or potash, meeting the following criteria: (1) Contains not more than 70% ammonium nitrate; and (2) Contains not more than 0.4% total combustible, organic material calculated as carbon or with not more than 45% ammonium nitrate and unrestricted combustible material. Fertilizers within these composition limits are only subject to the requirements of this subchapter when transported by aircraft or vessel, and are not subject to the requirements of this subchapter if shown by a trough test, as specified in the UN Manual of Tests and Criteria, Part III, sub-section 38.2 (incorporated by reference; see § 171.7 of this subchapter), not to be liable to self-sustaining decomposition.

* * * * *

134 This entry only applies to vehicles, machinery and equipment which are powered by wet batteries, sodium batteries, or lithium batteries and which are transported with these batteries installed. Examples of such items are electrically-powered cars, lawn mowers, wheelchairs and other mobility aids. A self-propelled vehicle which also contain an internal combustion engine must be consigned under the entry ''Vehicle, flammable gas powered'' or ''Vehicle, flammable liquid powered'', as appropriate.

* * * * *

145 This entry applies to formulations that neither detonate in the cavitated state nor deflagrate in laboratory testing, show no effect when heated under confinement, exhibit no explosive power, and are thermally stable (self-accelerating decomposition temperature (SADT) at 60 °C (140 °F) or higher for a 50 kg (110.2 lbs.) package). Formulations not meeting these criteria must be transported under the provisions applicable to the appropriate entry in the Organic Peroxide Table in § 173.225 of this subchapter.

146 This description may be used for a material that poses a hazard to the environment but does not meet the definition for a hazardous waste or a hazardous substance, as defined in § 171.8 of this subchapter, or any hazard class as defined in Part 173 of this subchapter, if it is designated as environmentally hazardous by the Competent Authority of the country of origin, transit or destination.

147 This entry applies to non-sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and a fuel intended to produce a Type E blasting explosive only after further processing. The mixture typically has the following composition: 60—85% ammonium nitrate; 5—30% water; 2—8% fuel; 0.5—4% emulsifier or thickening agent; 0—10% soluble flame suppressants; and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate. These substances may not be classified and transported unless approved by the Associate Administrator.

149 When transported as a limited quantity or a consumer commodity, the maximum net capacity specified in § 173.150(b)(2) of this subchapter for inner packagings may be increased to 5 L (1.3 gallons).

150 This description may be used only for uniform mixtures of fertilizers containing ammonium nitrate as the main ingredient within the following composition limits:

a. Not less than 90% ammonium nitrate with not more than 0.2% total combustible, organic material calculated as carbon, and with added matter, if any, that is inorganic and inert when in contact with ammonium nitrate; or

b. Less than 90% but more than 70% ammonium nitrate with other inorganic materials, or more than 80% but less than 90% ammonium nitrate mixed with calcium carbonate and/or dolomite, and not more than 0.4% total combustible, organic material calculated as carbon; or

c. Ammonium nitrate-based fertilizers containing mixtures of ammonium nitrate and ammonium sulphate with more than 45% but less than 70% ammonium nitrate, and not more than 0.4% total combustible, organic material calculated as carbon such that the sum of the percentage of compositions of ammonium nitrate and ammonium sulphate exceeds 70%.

151 If this material meets the definition of a flammable liquid in § 173.120 of this subchapter, a FLAMMABLE LIQUID label is also required and the basic description on the shipping paper must indicate the Class 3 subsidiary hazard.

153 The following applies to aerosols:

a. Division 2.1 applies when the aerosol is flammable according to § 173.306(i) of this subchapter.

b. Division 2.2 applies when the contents of the aerosol do not meet the criteria for Division 2.1, or Division 2.3.

c. Division 2.3 gases may not be used in an aerosol dispenser.

d. When the contents are classified as Division 6.1 or Class 8, the aerosol must have a subsidiary risk of Division 6.1 or Class 8.

e. Aerosols with contents meeting the criteria for PG I and PG II for Division 6.1 or Class 8 are forbidden for transportation.

f. Aerosols must meet the definition of aerosols in § 171.8 of this subchapter.

155 Fish meal or fish scrap may not be transported if the temperature at the time of loading either exceeds 35 °C (95 °F), or exceeds 5 °C (41 °F) above the ambient temperature, whichever is higher.

156 Asbestos that is immersed or fixed in a natural or artificial binder material, such as cement, plastic, asphalt, resins or mineral ore, or contained in manufactured products is not subject to the requirements of this subchapter.

157 This entry includes hybrid electric vehicles powered by both an internal combustion engine and wet, sodium or lithium batteries, transported with one or more batteries installed. Vehicles containing an internal combustion engine must be described as ''Vehicle, flammable gas powered,'' UN3166, or ''Vehicle, flammable liquid powered,'' UN3166, as appropriate.

159 This material must be protected from direct sunshine and kept in a cool, well-ventilated place away from sources of heat.

160 This entry applies to articles that are used as life-saving vehicle air bag inflators, air bag modules or seat-belt pretensioners containing Class 1 (explosive) materials or materials of other hazard classes. Air bag inflators and modules must be tested in accordance with Test series 6(c) of Part I of the UN Manual of Tests and Criteria (incorporated by reference; see § 171.7 of this subchapter), with no explosion of the device, no fragmentation of device casing or pressure vessel, and no projection hazard or thermal effect that would significantly hinder fire-fighting or other emergency response efforts in the immediate vicinity. If the air bag inflator unit satisfactorily passes the series 6(c) test, it is not necessary to repeat the test on the air bag module.

161 For domestic transport, air bag inflators, air bag modules or seat belt pretensioners that meet the criteria for a Division 1.4G explosive must be transported using the description, ''Articles, pyrotechnic *for technical purposes*,'' UN0431.

162 This material may be transported under the provisions of Division 4.1 only if it is packed so that at no time during transport will the percentage of diluent fall below the percentage that is stated in the shipping description.

(2) * * *

Code/Special Provisions

* * * * *

A54 Lithium batteries or lithium batteries contained or packed with equipment that exceed the maximum gross weight allowed by Column (9B) of the § 172.101 Table may only be transported on cargo aircraft if approved by the Associate Administrator.

A55 Prototype lithium batteries and cells that are packed with not more than 24 cells or 12 batteries per packaging that have not completed the test requirements in Sub-section 38.3 of the UN Manual of Tests and Criteria (incorporated by reference; see § 171.7 of this subchapter) may be transported by cargo aircraft if approved by the Associate Administrator and provided the following requirements are met:

a. The cells and batteries must be transported in rigid outer packagings that conform to the requirements of Part 178 of this subchapter at the Packing Group I performance level; and

b. Each cell and battery must be protected against short circuiting, must be surrounded by cushioning material that is non-combustible and non-conductive, and must be individually packed in an inner packaging that is placed inside an outer specification packaging.

A56 Radioactive material with a subsidiary hazard of Division 4.2, Packing Group I, must be transported in Type B packages when offered for transportation by aircraft. Radioactive material with a subsidiary hazard of Division 2.1 is forbidden from transport on passenger aircraft.

* * * * *

(4) *Table 1, Table 2, and Table 3—IB Codes, Organic Peroxide IBC Code, and IP Special IBC Packing Provisions.* These provisions apply only to transportation in IBCs. When no IBC code is assigned in the § 172.101 Table for a specific proper shipping name, an IBC may be authorized when approved by the Associate Administrator. When only certain types of IBCs are authorized in Table 2 (IBC Code IB52), alternative types of IBCs may be authorized when approved by the Associate Administrator. The letter ''Z'' shown in the marking code for composite IBCs must be replaced with a capital code letter designation found in § 178.702(a)(2) of this subchapter to specify the material used for the outer packaging. Tables 1, 2, and 3 follow:

TABLE 1.—IB CODES (IBC CODES)

IBC code	Authorized IBCs
* *	* * * * *
IB3	*Authorized IBCs:* Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1 and 31HA2, 31HB2, 31HN2, 31HD2 and 31HH2). *Additional Requirement:* Only liquids with a vapor pressure less than or equal to 110 kPa at 50 °C (1.1 bar at 122 °F), or 130 kPa at 55 °C (1.3 bar at 131 °F) are authorized, except for UN2672 (also see Special Provision IP8 in Table 3 for UN2672).
* *	* * * * *

TABLE 2.—ORGANIC PEROXIDE IBC CODE (IB52)

UN No.	Organic peroxide	Type of IBC	Maximum quantity (liters)	Control temperature	Emergency temperature
* *	* *	*	*	*	
	REMOVE:				
3109	Di-tert-butyl peroxide, not more than 52% in diluent type A.	31A 31HA1	1250 1000		
	ADD:				
* *	* *	*	*	*	
3109	Dicumyl peroxide, less than or equal to 100%.	31A 31HA1	1250 1000		
* *	* *	*	*	*	
3109	Di-tert-butyl peroxide, not more than 52% on diluent type B.	31A 31HA1	1250 1000		
* *	* *	*	*	*	
	Peroxyacetic acid, with not more than 26% hydrogen peroxide.	31A 31HA1	1500 1500		
* *	* *	*	*	*	
	Peroxyacetic acid, type F, stabilized.	31A 31HA1	1500 1500		
* *	* *	*	*	*	
3110	REVISE:				
* *	* *	*	*	*	
	Dicumyl peroxide, less than or equal to 100%.	31A	2000		

TABLE 2.—ORGANIC PEROXIDE IBC CODE (IB52)—Continued

UN No.	Organic peroxide	Type of IBC	Maximum quantity (liters)	Control temperature	Emergency temperature
* *	*	*	*	*	*

TABLE 3.—IP CODES

*	*	*	*	*	*	*

IP8 Ammonia solutions may be transported in rigid or composite plastic IBCs (31H1, 31H2 and 31HZ1) that have successfully passed, without leakage or permanent deformation, the hydrostatic test specified in § 178.814 of this subchapter at a test pressure that is not less than 1.5 times the vapor pressure of the contents at 55 °C (131 °F).

(5) * * *

Code/Special Provisions

* * * * *

N83 This material may not be transported in quantities of more than 11.5 kg (25.4 lbs) per package.

N84 The maximum quantity per package is 500 g (1.1 lbs.).

N85 Packagings certified at the Packing Group I performance level may not be used.

* * * * *

(7) * * *

(iii) * * *

PORTABLE TANK CODE T23

[Portable tank code T23 applies to self-reactive substances of Division 4.1 and organic peroxides of Division 5.2.]

UN No.	Hazardous material	Minimum test pressure (bar)	Minimum shell thickness (mm-reference steel) See . . .	Bottom opening requirements See . . .	Pressure-relief requirements See . . .	Filling limits	Control temperature	Emergency temperature
*	*		*	*	*	*	*	
	REMOVE:							
3119	tert-Butyl peroxyacetate, not more than 32% in diluent Type B.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).	+30 °C	+35 °C
3120	Organic peroxide Type F, solid, temperature controlled.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).	As approved by Assoc. Admin.	As approved by Assoc. Admin
*	*		*	*	*	*	*	
	ADD:							
*	*		*	*	*	*	*	
3109	Dicumyl peroxide, less than or equal to 100% in diluent Type B.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).		
*	*		*	*	*	*	*	
3119	tert-Butyl peroxyacetate, not more than 32% in diluent Type B.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).	+30 °C	+35 °C
*	*		*	*	*	*	*	
	Peroxyacetic acid, distilled, stabilized, not more than 41%.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).	+30 °C	+35 °C
3120	Organic peroxide Type F, solid, temperature controlled.	4	§ 178.274(d)(2)	§ 178.275(d)(3)	§ 178.275(g)(1)	Not more than 90% at 59 °F (15 °C).	As approved by Assoc. Admin.	As approved by Assoc. Admin
*	*		*	*	*	*	*	
	REVISE:							

PORTABLE TANK CODE T23—Continued

[Portable tank code T23 applies to self-reactive substances of Division 4.1 and organic peroxides of Division 5.2.]

UN No.	Hazardous material	Minimum test pressure (bar)	Minimum shell thickness (mm-reference steel) See . . .	Bottom opening requirements See . . .	Pressure-relief requirements See . . .	Filling limits	Control temperature	Emergency temperature
*	*		*	*	*	*	*	
3110	Dicumyl peroxide less than r equal to 100% with inert solids. Maximum quantity per portable tank 2,000 kg.	4	§ 178.274(d)(2) ..	§ 178.275(d)(3) ..	§ 178.275(g)(1) ..	Not more than 90% at 59 °F (15 °C).		
*	*		*	*	*	*	*	
3119	tert-Butyl peroxypivalate, not more than 27% in diluent Type B.	4	§ 178.274(d)(2) ..	§ 178.275(d)(3) ..	§ 178.275(g)(1) ..	Not more than 90% at 59 °F (15 °C).	+5 °C	+10 °C

(viii)* * *

Code/Special Provisions

* * * * *

TP3 For materials transported under elevated temperatures, the maximum degree of filling is determined by the following:

$$\left(\text{Degree of filling} = 95\frac{d_t}{d_f}\right).$$

Where:

d_t is the density of the material at the maximum mean bulk temperature during transport; and

d_f is the density of the material at the temperature in degrees celsius of the material during filling; and

* * * * *

■ 12. In § 172.202, paragraphs (a)(2), (a)(5) and (b) are revised and (a)(6) is added to read as follows:

§ 172.202 Description of hazardous material on shipping papers.

(a) * * *

(2) The hazard class or division number prescribed for the material, as shown in Column (3) of the § 172.101 Table. Except for combustible liquids, the subsidiary hazard class(es) or subsidiary division number(s) must be entered in parentheses immediately following the primary hazard class or division number. The words ''Class'' or ''Division'' may be included preceding the primary and subsidiary hazard class or division numbers. The hazard class need not be included for the entry ''Combustible liquid, n.o.s.'';

* * * * *

(5) The total quantity of hazardous materials covered by the description must be indicated (by mass or volume, or by activity for Class 7 materials) and must include an indication of the applicable unit of measurement. For example, ''200 kgs.'' or ''50 L.'' The following provisions also apply:

(i) For Class 1 materials, the quantity must be the net explosive mass.

(ii) For hazardous materials in salvage packaging, an estimate of the total quantity is acceptable.

(iii) The following are excepted from the requirements of paragraph (a)(5) of this section:

(A) Bulk packages, provided some indication of the total quantity is shown, for example, ''1 cargo tank'' or ''2 IBCs.''

(B) Cylinders, provided some indication of the total quantity is shown, for example, ''10 cylinders''.

(C) Packages containing only residue.

(6) The number and type of packages must be indicated. The type of packages may be indicated by description and by packaging specification number when applicable (for example, ''12 drums'', ''12 UN 1A1'', ''15 4G'', or ''2 UN 3H1 jerricans.'' Abbreviations may be used for indicating packaging types (for example, cyl. for cylinder), provided the abbreviations are commonly accepted and recognizable.

(b) Except as provided in this subpart, the basic description specified in paragraphs (a)(1), (2), (3) and (4) of this section must be shown in sequence with no additional information interspersed. For example, ''Cyclobutyl chloroformate, 6.1, (8,3), UN2744, PG II''. Alternatively, the basic description may be shown with the identification (ID) number listed first. For example, ''UN2744, Cyclobutyl chloroformate, 6.1, (8, 3), PG II.''

* * * * *

§ 172.203 [Amended]

■ 13. In § 172.203, paragraphs (i)(1), (i)(2), (i)(3) and (i)(6) are removed and paragraphs (i)(4) and (i)(5) are redesignated (i)(1) and (i)(2), respectively.

■ 14. In § 172.301, paragraph (a)(1) is revised to read as follows:

§ 172.301 General marking requirements for non-bulk packagings.

(a) * * *

(1) Except as otherwise provided by this subchapter, each person who offers a hazardous material for transportation in a non-bulk packaging must mark the package with the proper shipping name and identification number (preceded by ''UN'' or ''NA,'' as appropriate) for the material as shown in the § 172.101 Table. Identification numbers are not required on packagings that contain only ORM–D materials or limited quantities, as defined in § 171.8 of this subchapter, except for limited quantities marked in accordance with the marking requirements in § 172.315.

* * * * *

15. In § 172.312, a new paragraph (c)(6) is added to read as follows:

§ 172.312 Liquid hazardous materials in non-bulk packagings.

* * * * *

(c) * * *

(6) Packages containing liquid infectious substances in primary receptacles not exceeding 50 ml (1.7 oz.).

■ 16. A new section § 172.315 is added to read as follows:

§ 172.315 Packages containing limited quantities.

Except as otherwise provided in this subchapter, a package containing a limited quantity of hazardous materials is not required to be marked with the proper shipping name provided it is marked with the identification (ID) number, preceded by the letters ''UN'' or ''NA,'' as applicable, for the entry as shown in the § 172.101 Table, and placed within a square-on-point border in accordance with the following:

(a) The ID number marking must be durable, legible and of such a size relative to the package as to be readily visible. The width of line forming the square-on-point must be at least 2 mm and the height of the ID number must be at least 6 mm. The marking must be applied on at least one side or one end of the outer packaging.

(b) When two or more hazardous materials with different ID numbers are contained in the package, the packaging must be marked with either individual square-on-points bearing a single ID number, or a single square-on-point large enough to include each applicable ID number.

■ 17. A new section § 172.321 is added to read as follows:

§ 172.321 Air eligibility mark.

(a) *General*. Except as otherwise specified in this subchapter, each person who offers for transportation by aircraft a hazardous material in a non-bulk package must mark the package as required by this section to indicate that it meets the applicable requirements for air transport. The marking is a certification that the person offering the package for transportation has determined that it meets the air transport requirements of this subchapter; such as, the package is authorized and properly marked and labeled, its contents are properly classed and within quantity limits for air transport, and it conforms to all relevant packaging provisions such as those pertaining to closures, compatibility, pressure differential, and use of absorbent materials.

(b) *Location and design*. The marking must—

(1) Be placed adjacent to the markings prescribed in § 172.301(a);

(2) Be durable, legible and of a size relative to the package so as to be readily visible;

(3) Include an aircraft within a circle and may include the words ''Air Eligible'' in conjunction with the mark, such as:

Air Eligible

(c) *Exceptions from the air eligibility mark*. The air eligibility mark is not required for—

(1) Packages that are transported in accordance with the small quantity exceptions in § 173.4 of this subchapter;

(2) Packages that contain solid carbon dioxide (dry ice) and no other materials subject to the requirements of this subchapter;

(3) Except when overpacked, hazardous materials contained in articles that are not required to be packaged according to the requirements of this subchapter.

(4) Cylinders, except for those which are required to be overpacked or placed in an outer packaging, in which case the overpack or outer packaging must be marked with the air eligibility marking; and

(5) Packages or articles which are excepted from the marking requirements of this subchapter (for example, non-spillable batteries, vehicles); and

(d) *Prohibited display*. The air eligibility marking may not appear on a package containing a hazardous material which does not meet the requirements of this subchapter for air transport.

■ 18. In § 172.411, the section heading and paragraphs (b) and (d) are revised, and new paragraphs (e) and (f) are added to read as follows:

§ 172.411 EXPLOSIVE 1.1, 1.2, 1.3, 1.4, 1.5 and 1.6 labels, and EXPLOSIVE Subsidiary label.

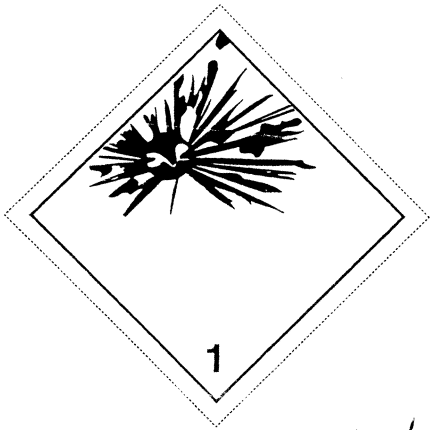
* * * * *

(b) In addition to complying with § 172.407, the background color on the EXPLOSIVE 1.1, EXPLOSIVE 1.2 and EXPLOSIVE 1.3 labels must be orange. The ''**'' must be replaced with the appropriate division number and compatibility group letter. The compatibility group letter must be the same size as the division number and must be shown as a capitalized Roman letter.

* * * * *

(d) In addition to complying with § 172.407, the background color on the EXPLOSIVE 1.4, EXPLOSIVE 1.5 and EXPLOSIVE 1.6 label must be orange. The ''*'' must be replaced with the appropriate compatibility group. The compatibility group letter must be shown as a capitalized Roman letter. Division numbers must measure at least 30 mm (1.2 inches) in height and at least 5 mm (0.2 inches) in width.

(e) An EXPLOSIVE subsidiary label is required for materials identified in Column (6) of the HMT as having an explosive subsidiary hazard. The division number or compability group letter may be displayed on the subsidiary hazard label. Except for size and color, the EXPLOSIVE subsidiary label must be as follows:



(f) The EXPLOSIVE subsidiary label must comply with § 172.407.

■ 19. In § 172.504, paragraph (g) introductory text is revised to read as follows:

§ 172.504 General placarding requirements.

* * * * *

(g) For shipments of Class 1 (explosive materials) by aircraft or vessel, the applicable compatibility group letter must be displayed on the placards, or labels when applicable, required by this section. When more than one compatibility group placard is required for Class 1 materials, only one placard is required to be displayed, as provided in paragraphs (g)(1) through (g)(4) of this section. For the purposes of paragraphs (g)(1) through (g)(4), there is a distinction between the phrases *explosive articles* and *explosive substances*. *Explosive article* means an article containing an explosive substance; examples include a detonator, flare, primer or fuse. *Explosive substance* means a substance contained in a packaging that is not contained in an article; examples include black powder and smokeless powder.

* * * * *

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

■ 20. The authority citation for part 173 continues to read as follows:

Authority: 49 U.S.C. 5101–5127, 44701; 49 CFR 1.53.

■ 21. In § 173.2a, in the paragraph (b) Precedence of Hazard Table, the title of the table and the first three entries in Precedence of Hazard Table are revised to read as follows:

§ 173.2a Classification of a material having more than one hazard.

* * * * *

(b) * * *

PRECEDENCE OF HAZARD TABLE

[Hazard class or division and packing group]

	4.2	4.3	5.1 I[1]	5.1 II[1]	5.1 III[1]	6.1, I dermal	6.1, I oral	6.1 II	6.1 III	8, I liquid	8, I solid	8, II liquid	8.1 II solid	8, III liquid	8, III, solid
3 I[2]	.....	4.3	.....	.....	.....	3	3	3	3	3	(3)	3	(3)	3	(3)
3 II[2]	.....	4.3	.....	.....	.....	3	3	3	3	8	(3)	3	(3)	3	(3)
3 III[2]	.....	4.3	.....	.....	.....	6.1	6.1	6.1	3[4]	8	(3)	8	(3)	3	(3)

* * * * * * *

[2] Materials of Division 4.1 other than self-reactive substances and solid desensitized explosives, and materials of Class 3 other than liquid desensitized explosives.

[3] Denotes an impossible combination.

[4] For pesticides only, where a material has the hazards of Class 3, Packing Group III, and Division 6.1, Packing Group III, the primary hazard is Division 6.1, Packing Group III.

* * * * * * *

■ 22. In § 173.21, paragraph (f)(3)(ii) is revised to read as follows:

§ 173.21 Forbidden materials and packages.

* * * * *

(f) * * *

(3) * * *

(ii) For transportation by vessel, shipments are authorized in accordance with the control temperature requirements in Chapter 7.7 of the IMDG Code (incorporated by reference; see § 171.7 of this subchapter).

* * * * *

■ 23. In § 173.22, paragraph (a)(4) is revised to read as follows:

§ 173.22 Shipper's responsibility.

(a) * * *

(4) For a DOT Specification or UN standard packaging subject to the requirements of part 178 of this subchapter, a person must perform all functions necessary to bring the package into compliance with parts 173 and 178 of this subchapter, as identified by the packaging manufacturer or subsequent distributor (for example, applying closures consistent with the manufacturer's closure instructions) in accordance with § 178.2 of this subchapter.

* * * * *

■ 24. In § 173.24, paragraphs (b) and (f) are revised to read as follows:

§ 173.24 General requirements for packagings and packages.

* * * * *

(b) Each package used for the shipment of hazardous materials under this subchapter shall be designed, constructed, maintained, filled, its contents so limited, and closed, so that under conditions normally incident to transportation—

(1) Except as otherwise provided in this subchapter, there will be no identifiable (without the use of instruments) release of hazardous materials to the environment;

(2) The effectiveness of the package will not be substantially reduced; for example, impact resistance, strength, packaging compatibility, etc. must be maintained for the minimum and maximum temperatures, changes in humidity and pressure, and shocks, loadings and vibrations, normally encountered during transportation;

(3) There will be no mixture of gases or vapors in the package which could, through any credible spontaneous increase of heat or pressure, significantly reduce the effectiveness of the packaging;

(4) There will be no hazardous material residue adhering to the outside of the package during transport.

* * * * *

(f) Closures. (1) Closures on packagings shall be so designed and closed that under conditions (including the effects of temperature, pressure and vibration) normally incident to transportation—

(i) Except as provided in paragraph (g) of this section, there is no identifiable release of hazardous materials to the environment from the opening to which the closure is applied; and

(ii) The closure is leakproof and secured against loosening. For air transport, stoppers, corks or other such friction closures must be held in place by positive means.

(2) Except as otherwise provided in this subchapter, a closure (including gaskets or other closure components, if any) used on a specification packaging must conform to all applicable requirements of the specification and must be closed in accordance with information, as applicable, provided by the manufacturer's notification required by § 178.2 of this subchapter.

* * * * *

■ 25. In 173.25, paragraph (a)(2) is revised to read as follows:

§ 173.25 Authorized packagings and overpacks.

(a) * * *

(2) The overpack is marked with the proper shipping name and identification number, the air eligibility marking, when applicable, and is labeled as required by this subchapter for each hazardous material contained therein, unless markings and labels representative of each hazardous material in the overpack are visible.

* * * * *

■ 26. In § 173.27, paragraph (e) is revised, and a new paragraph (i) is added to read as follows:

§ 173.27 General requirements for transportation by aircraft.

* * * * *

(e) Absorbent materials. Except as otherwise provided in this subchapter, liquid hazardous materials of Class 3, 4, or 8, or Division 5.1, 5.2 or 6.1 that are packaged and offered for transport in glass, earthenware, plastic or metal inner packagings must be packaged using absorbent material as follows:

(1) Packing Group I liquids on passenger aircraft must be packaged using materials capable of absorbing the entire contents of the inner packagings.

(2) Packing Group I liquids on cargo aircraft, and Packing Group II liquids including Division 5.2 liquids on passenger and cargo aircraft, must be packaged using a sufficient quantity of absorbent material to absorb the entire contents of any one of the inner packagings containing such liquids. When the inner packagings are of different sizes and quantities, sufficient absorbent material must be used to absorb the entire contents of the inner packaging with the greatest volume of liquid.

(3) When absorbent materials are required and the outer packaging is not liquid tight, a means of containing the liquid in the event of a leakage must be provided in the form of a leakproof liner, plastic bag or other equally efficient means of containment.

(4) Absorbent material must not react dangerously with the liquid (see §§ 173.24 and 173.24a.).

(5) Absorbent material is not required if the inner packagings are so protected that they are unlikely to break and leak their contents from the outer packaging under normal conditions of transportation.

* * * * *

(i) Air eligibility marking. Each person who offers for transportation a hazardous material by aircraft must mark the packages containing the hazardous materials with an air eligibility mark as specified in § 172.321 of this subchapter.

■ 27. In § 173.62, the following changes are made:

■ a. In paragraph (b), in the Explosives Table, a new entry is added in appropriate numerical order; and

■ b. In paragraph (c), in the Table of Packing Methods, in the first column, for the packing instruction entry 112(b), in the last sentence, the wording ''3. For UN 0222 and UN 0223'' is removed and ''3. For UN 0222'' is added in its place.

■ The new entry to be added to the paragraph (b) Explosives Table reads as follows:

§ 173.62 Specific packaging requirements for explosives.

* * * * *

(b) * * *

EXPLOSIVES TABLE

ID No.	PI
* * * * *	
UN0503	135
* * * * *	

* * * * *

■ 28. In § 173.115, paragraphs (d) and (e) are revised to read as follows:

§ 173.115 Class 2, Divisions 2.1, 2.2, and 2.3—Definitions.

* * * * *

(d) *Non-liquefied compressed gas.* A gas, which when packaged under pressure for transportation is entirely gaseous at −50 °C (−58 °F) with a critical temperature less than or equal to −50 °C (−58 °F), is considered to be a non-liquefied compressed gas.

(e) *Liquefied compressed gas.* A gas, which when packaged under pressure for transportation is partially liquid at temperatures above −50 °C (−58 °F), is considered to be a liquefied compressed gas. A liquefied compressed gas is further categorized as follows:

(1) *High pressure liquefied gas* which is a gas with a critical temperature between −50 °C (−58 °F) and + 65 °C (149 °F), and

(2) *Low pressure liquefied gas* which is a gas with a critical temperature above + 65 °C (149 °F).

* * * * *

■ 29. In § 173.152, paragraphs (b)(2) and (b)(4)(ii) are revised to read as follows:

§ 173.152 Exceptions for Division 5.1 (oxidizers) and Division 5.2 (organic peroxides).

* * * * *

(b) * * *

(2) For oxidizers in Packing Group III, inner packagings not over 5 L (1.3 gallons) net capacity each for liquids or not over 5.0 kg (11 lbs) net capacity each for solids, and packed in strong outer packagings.

* * * * *

(4) * * *

(ii) The flammable liquid component must be packed in inner packagings not over 5 L (1.3 gallons) net capacity each for Packing Group II or III liquid; and

* * * * *

■ 30. In § 173.153, in paragraph (b) introductory text, a new first sentence is added, and paragraph (b)(1) is revised to read as follows:

§ 173.153 Exceptions for Division 6.1 (poisonous materials).

* * * * *

(b) *Limited quantities of Division 6.1 materials.* The exceptions in this paragraph do not apply to poison-by-inhalation materials. * * *

(1) For poisonous liquids in Packing Group III, inner packagings not over 5 L (1.3 gallons) net capacity each, packed in strong outer packagings; and

* * * * *

■ 31. In § 173.154, paragraph (b)(2) is revised to read as follows:

§ 173.154 Exceptions for Class 8 (corrosive materials).

* * * * *

(b) * * *

(2) For corrosive materials in Packing Group III, in inner packagings not over 5.0 L (1.3 gallons) net capacity each for liquids, or not over 5.0 kg (11 lbs) net capacity each for solids, and packed in strong outer packagings.

* * * * *

■ 32. In § 173.159, in paragraph (a), a second sentence is added, and a new paragraph (d)(4) is added to read as follows:

§ 173.159 Batteries, wet.

(a) * * * For transportation by aircraft, the packaging for wet cell batteries must incorporate an acid-or alkali-proof liner, or include a supplementary packaging with sufficient strength and adequately sealed to prevent leakage of electrolyte fluid in the event of spillage.

* * * * *

(d) * * *

(4) At a temperature of 55 °C (131 °F), the battery must not contain any unabsorbed free-flowing liquid, and must be designed so that electrolyte will not flow from a ruptured or cracked case.

* * * * *

■ 33. Section 173.161 is revised to read as follows:

§ 173.161 Chemical kits and first aid kits.

(a) Chemical kits and First aid kits must conform to the following requirements:

(1) The kits may only contain hazardous materials for which packaging exceptions are provided in column 8(A) the § 172.101 Table of this subchapter.

(2) The kits must be packed in a strong outer packaging conforming to the packaging requirements of subpart B of this subchapter.

(3) The kits must include sufficient absorbent material to completely absorb the contents of any liquid hazardous materials contained in the kits. The contents must be separated, placed, or packed, and closed with cushioning material to protect them from damage.

(4) The contents of the kits must be packed so there will be no possibility of the mixture of contents causing dangerous evolution of heat or gas.

(5) The packing group assigned to the kits as a whole must be the most stringent packing group assigned to any individual substance contained in the kits.

(6) Inner receptacles containing hazardous materials within the kits must not contain more than 250 ml for liquids or 250 g for solids per receptacle.

(7) The total quantity of hazardous materials in any one outer package must not exceed either 10 L or 10 kg.

(b) Chemical kits and First aid kits are excepted from the specification packaging requirements of this subchapter. Chemical kits and First aid kits are also excepted from the labeling requirements of this subchapter except when offered for transportation or transported by air. In addition, Chemical kits and First aid kits are not subject to subpart F of part 172 of this subchapter (Placarding), part 174 (Carriage by rail) of this subchapter except § 174.24 (Shipping papers), and part 177 (Carriage by highway) of this subchapter except § 177.817 (Shipping

papers). Kits that meet the definition for a consumer commodity in § 171.8 of this subchapter may be transported in accordance with the exceptions for ORM materials in § 173.156.

■ 34. In § 173.166, paragraphs (b), (c), (d)(2), (e) introductory text and (f) are revised; paragraph (d)(3) is redesignated as paragraph (d)(4) and revised; and new paragraphs (d)(3), (d)(5), and (e)(5) are added to read as follows:

§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.

* * * * *

(b) *Classification.* An air bag inflator, air bag module, or seat-belt pretensioner may be classed as Class 9 (UN3268) if:

(1) The manufacturer has submitted each design type air bag inflator, air bag module, or seat-belt pretensioner to a person approved by the Associate Administrator, in accordance with § 173.56(b), for examination and testing. The submission must contain a detailed description of the inflator or pretensioner or, if more than a single inflator or pretensioner is involved, the maximum parameters of each particular inflator or pretensioner design type for which approval is sought and details on the complete package. The manufacturer must submit an application, including the test results and report recommending the shipping description and classification for each device or design type to the Associate Administrator, and must receive written notification from the Associate Administrator that the device has been approved for transportation and assigned an EX number; or,

(2) The manufacturer has submitted an application, including a classification issued by the competent authority of a foreign government to the Associate Administrator, and received written notification from the Associate Administrator that the device has been approved for transportation and assigned an EX number.

(c) *EX numbers.* When offered for transportation, the shipping paper must contain the EX number or product code for each approved inflator, module or pretensioner in association with the basic description required by § 172.202(a) of this subchapter. Product codes must be traceable to the specific EX number assigned to the inflator, module or pretensioner by the Associate Administrator. The EX number or product code is not required to be marked on the outside package.

(d) * * *

(2) An air bag module containing an inflator that has been previously approved for transportation is not required to be submitted for further examination or approval.

(3) An air bag module containing an inflator that has previously been approved as a Division 2.2 material is not required to be submitted for further examination to be reclassed as a Class 9 material.

(4) *Shipments for recycling.* When offered for domestic transportation by highway, rail freight, cargo vessel or cargo aircraft, a serviceable air bag module or seat-belt pretensioner removed from a motor vehicle that was manufactured as required for use in the United States may be offered for transportation and transported without compliance with the shipping paper requirement prescribed in paragraph (c) of this section. However, the word ''Recycled'' must be entered on the shipping paper immediately after the basic description prescribed in § 172.202 of this subchapter. No more than one device is authorized in the packaging prescribed in paragraph (e)(1), (2) or (3) of this section. The device must be cushioned and secured within the package to prevent movement during transportation.

(5) Until October 1, 2005, approved ''Air bag inflators, compressed gas, *or* Air bag modules, compressed gas *or* Seat-belt pretensioners, compressed gas,'' UN3353, packaged in a non-specification packaging before October 1, 2003, may be transported or offered for domestic transportation when described, marked, and labeled as a Division 2.2 material in accordance with the HMR in effect on September 30, 2003.

(e) *Packagings.* Rigid, outer packagings, meeting the general packaging requirements of part 173, and the packaging specification and performance requirements of part 178 of this subchapter at the Packing Group III performance level are authorized. The packagings must be designed and constructed to prevent movement of the articles and inadvertent operation.

* * * * *

(5) Packagings specified in the approval document issued by the Associate Administrator in accordance with paragraph (e) of this section are also authorized.

(f) *Labeling.* Notwithstanding the provisions of § 172.402 of this subchapter, each package or handling device must display a CLASS 9 label. Additional labeling is not required when the package contains no hazardous materials other than the devices.

■ 35. In § 173.185, paragraph (e)(4) is revised, paragraph (e)(5) is removed and reserved, paragraph (e)(7) is revised, and a new paragraph (k) is added to read as follows:

§ 173.185 Lithium batteries and cells.

* * * * *

(e) * * *

(4) Authorized outer packagings: rigid outer packagings that conform to the general packaging requirements of part 173 and the packaging specification and performance requirements of part 178 of this subchapter at the Packing Group II performance level. Cells and batteries must be packed in such a manner as to effectively prevent short circuits through the use of inner packagings, dividers, or other suitable means.

(5) [Reserved]

* * * * *

(7) Except as provided in paragraph (h) of this section, cells and batteries with a liquid cathode containing sulfur dioxide, sulfuryl chloride or thionyl chloride may not be offered for transportation or transported if any cell has been discharged to the extent that the open circuit voltage is less than two volts, or is less than two-thirds of the voltage of the fully charged cell, whichever is less.

* * * * *

(k) Batteries employing a strong, impact-resistant outer casing and exceeding a gross mass of 12 kg (26.5 lbs.), and assemblies of such batteries, may be packed in strong outer packagings, in protective enclosures (for example, in fully enclosed wooden slatted crates) or on pallets. Batteries must be secured to prevent inadvertent movement, and the terminals may not support the weight of other superimposed elements. Batteries packaged in this manner may only be transported by cargo aircraft and must be approved by the Associate Administrator.

§ 173.216 [Amended]

■ 36. In § 173.216, paragraph (b) is removed and reserved.

■ 37. In § 173.218, paragraph (a) introductory text is revised and paragraph (b) is removed and reserved to read as follows:

§ 173.218 Fish meal or fish scrap.

(a) Except as provided in Column (7) of the HMT in § 172.101 of this subchapter, fish meal or fish scrap, containing at least 6%, but not more than 12% water, is authorized for transportation by vessel only when packaged as follows:

* * * * *

(b) [Reserved]

* * * * *

■ 38. In § 173.220, paragraph (a)(2) is revised; in paragraph (c), the first sentence is revised; paragraph (e) is redesignated as paragraph (f); and a new paragraph (e) is added to read as follows:

§ 173.220 Internal combustion engines, self-propelled vehicles, mechanical equipment containing internal combustion engines, and battery powered vehicles or equipment.

(a) * * *

(2) It is equipped with a wet electric storage battery other than a non-spillable battery, or with a sodium or lithium battery; or

* * * * *

(c) *Battery powered or installed.* Batteries must be securely installed, and wet batteries fastened in an upright position. * * *

* * * * *

(e) *Additional requirements for internal combustion engines and vehicles with certain electronic equipment when transported by aircraft or vessel.* When an internal combustion engine that is not installed in a vehicle or equipment is offered for transportation by aircraft or vessel, all fuel, coolant or hydraulic systems remaining in the engine must be drained as far as practicable, and all disconnected fluid pipes that previously contained fluid must be sealed with leak-proof caps that are positively retained. When offered for transportation by aircraft, vehicles equipped with theft-protection devices, installed radio communications equipment or navigational systems must have such devices, equipment or systems disabled.

* * * * *

■ 39. A new § 173.223 is added to read as follows:

§ 173.223 Musk xylene.

(a) Packagings for ''Musk xylene'' or ''5-tert-Butyl-2,4,6-trinitro-m-xylene,'' when offered for transportation or transported by rail, highway, or vessel, must conform to the general packaging requirements of subpart B of part 173, and to the requirements of part 178 of this subchapter at the Packing Group III performance level and may only be transported in the following packagings:

(1) Fiberboard box (4G) with a single inner plastic bag, and a maximum net mass of not more than 50 kg (110 lbs).

(2) Fiberboard box (4G) or fiber drum (1G), with a plastic inner packaging not exceeding 5 kg (11 lbs), and a maximum net mass of not more than 25 kg (55 lbs).

(3) Fiber drum (1G), and a maximum net mass of not more than 50 kg (110 lbs), that may be fitted with a coating or lining.

(b) [Reserved]

■ 40. In § 173.224, in paragraph (b)(4), the fourth sentence is revised; in the table following paragraph (b)(7), 5 entries are removed, 9 entries are added, and 1 entry is revised in appropriate alphabetical order; and in the ''NOTES'' immediately following the Table, a new Note ''4'' is added in appropriate numerical order to read as follows:

§ 173.224 Packaging and control and emergency temperatures for self-reactive materials.

* * * * *

(b) * * *

(4) * * * Bulk packagings are authorized as specified in § 173.225(e) for Type F self-reactive substances. * * *

* * * * *

(7) * * *

SELF-REACTIVE MATERIALS TABLE

Self-reactive substance (1)	Identification No. (2)	Concentration (%) (3)	Packing method (4)	Control temperature (°C) (5)	Emergency temperature (6)	Notes (7)
* * *	*	*		*	*	
[REMOVE:]						
Benzene-1,3-disulphohydrazide, as a paste	3226	52	OP7			
Benzene sulphohydrazide	3226	100	OP7			
2-Diazo-1-Naphthol-4-sulphochloride	3222	100	OP5			
2-Diazo-1-Naphthol-5-sulphochloride	3222	100	OP5			
Diphenyloxide-4,4'-disulphohydrazide	3226	100	OP7			
[ADD:]						
* * *	*	*		*	*	
Benzene-1,3-disulphonylhydrazide, as a paste	3226	52	OP7			
Benzene sulphohydrazide	3226	100	OP7			
* * *	*	*		*	*	
2-Diazo-1-Naphthol sulphonic acid ester mixture	3226	<100	OP7			4
2-Diazo-1-Naphthol-4-sulphonyl chloride	3222	100	OP5			
2-Diazo-1-Naphthol-5-sulphonyl chloride	3222	100	OP5			
2,5-Dibutoxy-4-(4-morpholinyl)-Benzenediazonium, tetrachlorozincate (2:1)	3228	100	OP8			
* * *	*	*		*	*	
2,5-Diethoxy-4-(4-morpholinyl)-benzenediazonium sulphate	3226	100	OP7			
* * *	*	*		*	*	
4-(Dimethylamino)-benzenediazonium trichlorozincate (-1)	3228	100	OP8			
* * *	*	*		*	*	
Diphenyloxide-4,4'-disulphonylhydrazide	3226	100	OP7			
* * *	*	*		*	*	
[REVISE:]						
2,2'-Azodi(isobutyronitrile) as a water based paste	3224	≤50	OP6			

* * * * *

Notes:

* * * * *

4. This entry applies to mixtures of esters of 2-diazo-1-naphthol-4-sulphonic acid and 2-diazo-1-naphthol-5-sulphonic acid.

■ 41. In § 173.225, paragraph (b)(6) is revised; in the Organic Peroxide Table, 1 entry is removed, 9 entries are added, and 21 entries are revised in appropriate alphabetical order; in the ''Notes'' immediately following the Table, Note ''9'' is revised, and two new notes, ''27'' and ''28'' are added in appropriate numerical order; in paragraph (e)(3)(xii), the last sentence is revised; and paragraph (e)(5) is revised to read as follows:

§ 173.225 Packaging requirements and other provisions for organic peroxides.

* * * * *

(b) * * *

(6) *Packing method.* Column 6 specifies the highest packing method (largest packaging capacity) authorized for the organic peroxide. Lower numbered packing methods (smaller packaging capacities) are also authorized. For example, if OP3 is specified, then OP2 and OP1 are also authorized. The designation ''IBC'' means Special Provision IB52 in § 172.102 of this subchapter applies. The designation ''Bulk'' means paragraph (e) of this section applies. When an IBC or bulk packaging is authorized and meets the requirements of paragraph (e) of this section, lower control temperatures than those specified for non-bulk packagings may be required. The Table of Packing Methods in paragraph (d) of this section defines the non-bulk packing methods.

* * * * *

(8) * * *

ORGANIC PEROXIDE TABLE

Technical name	ID No.	Concentration (mass %)	Diluent (mass %)			Water (mass %)	Packing method	Temperature (°C)		Notes
			A	B	I			Control	Emergency	
(1)	(2)	(3)	(4a)	(4b)	(4c)	(5)	(6)	(7a)	(7b)	(8)
* * * * *										
[REMOVE:]										
Peracetic acid with not more than 20% hydrogen peroxide.	.....	.....	.....	.....	.....	.....	.....	.....	.....	
* * * * *										
[ADD:]										
* * * * *										
tert-Butyl peroxyneodecanoate [as a stable dispersion in water].	UN3119	≤42	.....	.....	.....	.....	OP8, IBC	−5	+5	
* * * * *										
Di-tert-butyl peroxide	UN3109	≤32	≥68	.....	.....	.....	Bulk	.....	.....	14
* * * * *										
Diisopropyl peroxydicarbonate	UN3115	≤28	≥72	.....	.....	.....	OP7	−15	−5	
* * * * *										
Di-n-Propyl peroxydicarbonate	UN3113	≤100	.....	.....	.....	.....	OP3	−25	−15	
* * * * *										
Di-(3,5,5-trimethylhexanoyl) peroxide	UN3119	≤38	≥62	.....	.....	.....	Bulk	−5	+5	14
* * * * *										
Peroxyacetic acid *with not more than 20% hydrogen peroxide*.	Exempt ..	≤6	.....	.....	.....	≥60	Exempt	.....	.....	28
Peroxyacetic acid *with not more than 26% hydrogen peroxide*.	UN3109	≤17	.....	.....	.....	.....	OP8, IBC	.....	.....	13, 20, 28
Peroxyacetic acid *with 7% hydrogen peroxide*.	UN3107	≤36	.....	.....	.....	≥15	OP8	.....	.....	13, 20, 28
* * * * *										
Peroxyacetic acid, distilled, Type F, stabilized.	UN3119	≤41	.....	.....	.....	.....	Bulk	+30	+35	14, 27, 28
* * * * *										
[REVISE:]										
* * * * *										
tert-Butyl hydroperoxide	UN3109	≤72	.....	.....	.....	≥28	OP8, IBC, Bulk	.....	.....	13, 14
* * * * *										
tert-Butyl peroxyacetate	UN3109	≤32	≥68	.....	.....	.....	OP8, IBC	.....	.....	
* * * * *										
tert-Butyl peroxyacetate	UN3109	≤32	.....	≥68	.....	.....	OP8	.....	.....	
* * * * *										
tert-Butyl peroxyneodecanoate [as a stable dispersion in water].	UN3117	≤52	.....	.....	.....	.....	OP8, IBC	0	+10	
* * * * *										
tert-Butyl peroxyneodecanoate	UN3119	≤32	≥68	.....	.....	.....	OP8, IBC	0	+10	
* * * * *										
tert-Butyl peroxy-3,5,5- trimethylhexanoate	UN3109	≤32	≥68	.....	.....	.....	OP8, IBC	.....	.....	

ORGANIC PEROXIDE TABLE—Continued

Technical name	ID No.	Concentration (mass %)	Diluent (mass %)			Water (mass %)	Packing method	Temperature (°C)		Notes
			A	B	I			Control	Emergency	
(1)	(2)	(3)	(4a)	(4b)	(4c)	(5)	(6)	(7a)	(7b)	(8)
* *		*		*			*	*	*	
Cumyl hydroperoxide	UN3109	≤90	≥10				OP8, IBC, Bulk			13, 14, 15
* *		*		*			*	*	*	
Dibenzoyl peroxide [as a stable dispersion in water].	UN3109	≤42					OP8, IBC			
* *		*		*			*	*	*	
Di-(4-tert-butylcyclothexyl) peroxydicarbonate [as stable dispersion in water].	UN3119	≤42					OP8, IBC	+30	+35	
* *		*		*			*	*	*	
Di-tert-butyl peroxide	UN3109	≤52		≥48			OP8, IBC, Bulk			14, 24
* *		*		*			*	*	*	
1,1-Di-(tert-butylperoxy) cyclohexane	UN3109	≤42	≥58				OP8, IBC			
* *		*		*			*	*	*	
Dicetyl peroxydicaronate [as a stable dispersion in water].	UN3119	≤42					OP8, IBC	+30	+35	
* *		*		*			*	*	*	
Dicumyl peroxide	UN3109	>52–100		≤48			OP8, IBC, Bulk			9, 11, 14
Dicumyl peroxide	UN3110	>52–100		≤48			OP8, IBC, Bulk			9, 11, 14
* *		*		*			*	*	*	
Dilauroyl peroxide [as a stable dispersion in water].	UN3109	≤42					OP8, IBC			
* *		*		*			*	*	*	
Di-(3,5,5-trimethylhexanoyl)peroxide [as a stable dispersion in water].	UN3119	≤52					OP8, IBC	+10	+15	
* *		*		*			*	*	*	
Isopropylcumyl hydroperoxide	UN3109	≤72	≥28				OP8, IBC, Bulk			13, 14
* *		*		*			*	*	*	
p-Menthyl hydroperoxide	UN3109	≤72	≥28				OP8, IBC, Bulk			14
* *		*		*			*	*	*	
Peroxyacetic acid, type F, stabilized	UN3109	≤43					OP8, IBC			13, 20, 28
* *		*		*			*	*	*	
Pinanyl hydroperoxide	UN3109	<56	>44				OP8, Bulk			14
* *		*		*			*	*	*	
1,1,3,3-Tetramethylbutyl peroxyneodecanoate [as a stable dispersion in water].	UN3119	≤52					OP8, IBC	−5	+5	
* *		*		*			*	*	*	

Notes:

* * * * *

9. For domestic shipments, this material may be packaged in bulk packagings under the provisions of paragraph (e)(3)(xii) of this section.

* * * * *

27. Formulations derived from distillation of peroxyacetic acid originating from peroxyacetic acid in a concentration of not more than 41% with water, total active oxygen less than or equal to 9.5% (peroxyacetic acid plus hydrogen peroxide).

28. For the purposes of this section, the names ''Peroxyacetic acid'' and ''Peracetic acid'' are synonymous.

* * * * *

(e) * * *

(3) * * *

(xii) * * * These portable tanks are not subject to any other requirements of paragraph (e) of this section.

* * * * *

(5) *IBCs.* IBCs are authorized subject to the conditions and limitations of this section if the IBC type is authorized according to Special Provision IB52 (see § 172.102(c)(4) of this subchapter), as applicable, and the IBC conforms to the requirements in subpart O of part 178 of this subchapter at the Packing Group II performance level. The additional requirements in paragraphs (e)(5)(i) and (e)(5)(ii) of this section also apply. Type F organic peroxides or self-reactive substances that are not authorized for a specific IBC may be transported in IBCs other than those specified in IB52 if approved by the Associate Administrator.

* * * * *

■ 42. In § 173.244, paragraph (c) is revised to read as follows:

§ 173.244 Bulk packaging for certain pyrophoric liquids (Division 4.2), dangerous when wet (Division 4.3) materials, and poisonous liquids with inhalation hazards (Division 6.1).

* * * * *

(c) *Portable tanks:* DOT 51 portable tanks and UN portable tanks that meet the requirements of this subchapter, when a T code is specified in Column (7) of the § 172.101 Table of this subchapter for the specific hazardous material, are authorized.

■ 43. In § 173.306, the paragraph (f) heading is revised and a new paragraph (j) is added to read as follows:

§ 173.306 Limited quantities of compressed gases.

* * * * *

(f) *Accumulators (Articles, pressurized pneumatic or hydraulic containing non-flammable gas).* * * *

* * * * *

(j) For certain compressed gases not subject to the requirements of this subchapter, see § 173.307(a)(5).

■ 44. In § 173.307, a new paragraph (a)(5) is added to read as follows:

§ 173.307 Exceptions for compressed gases.

(a) * * *

(5) *Aerosols with a capacity of less than 50 ml.* Aerosols, as defined in § 171.8 of this subchapter, with a capacity not exceeding 50 ml and with a pressure not exceeding 970 kPa (141 psig) at 55 °C (131 °F), containing no hazardous materials other than a Division 2.2 gas, are not subject to the requirements of this subchapter.

* * * * *

■ 45. In § 173.418, a new paragraph (e) is added to read as follows:

§ 173.418 Authorized packages-pyrophoric Class 7 (radioactive) materials.

* * * * *

(e) Pyrophoric Class 7 (radioactive) materials transported by aircraft must be packaged in Type B packages, as authorized in Column (8) of the § 172.101 Table of this subchapter.

■ 46. In § 173.422, paragraphs (a)(2), (a)(3), and (a()4) are revised to read as follows:

§ 173.422 Additional requirements for excepted packages containing Class 7 (radioactive materials).

(a) * * *

(2) ''This package conforms to the conditions and limitations specified in 49 CFR 173.424 for radioactive material, excepted package-instruments or articles, UN 2911'';

(3) ''This package conforms to the conditions and limitations specified in 49 CFR 173.426 for radioactive material, excepted package-articles manufactured from natural uranium or depleted uranium or natural thorium, UN 2909''; or

(4) ''This package conforms to the conditions and limitations specified in 49 CFR 173.428 for radioactive material, excepted package-empty packaging, UN 2908.''

* * * * *

PART 175—CARRIAGE BY AIRCRAFT

■ 47. The authority citation for part 175 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 48. In § 175.10, paragraph (a)(4)(v) is added, and paragraph (a)(25) is revised to read as follows:

§ 175.10 Exceptions.

(a) * * *

(4) * * *

(iv) * * *

(v) The provisions of this paragraph (a)(4) also apply to an aircraft operator when transporting passenger or crew member baggage to its intended destination, if the baggage has been separated from the passenger or crew member, including transfer to another carrier for transport to its intended destination.

* * * * *

(25) With approval of the aircraft operator, a passenger or crew member may carry in checked or carry-on baggage no more than two small gas cartridges containing no hazardous material other than a Division 2.2 gas that are fitted into a self-inflating life-jacket for inflation purposes, plus no more than two spare cartridges.

* * * * *

■ 49. In § 175.30, a new paragraph (a)(5) is added to read as follows:

§ 175.30 Accepting and inspecting shipments.

* * * * *

(a) * * *

(5) Marked with the air eligibility marking in accordance with § 172.321 of this subchapter, unless excepted from marking.

* * * * *

■ 50. In § 175.90, paragraphs (b) and (c) are revised to read as follows:

§ 175.90 Damaged shipments.

* * * * *

(b) Except as provided in § 175.700, the operator of an aircraft must remove from the aircraft any package, baggage or cargo that appears to be leaking or contaminated by a hazardous material. In the case of a package, baggage or cargo that appears to be leaking, the operator must ensure that other packages, baggage or cargo in the same shipment are in proper condition for transport aboard the aircraft and that no other package, baggage or cargo has been contaminated or is leaking. If an operator becomes aware that a package, baggage or cargo not identified as containing a hazardous material has been contaminated, or the operator has cause to believe that a hazardous material may be the cause of the contamination, the operator must take reasonable steps to identify the nature and source of contamination before proceeding with the loading of the contaminated baggage or cargo. If the contaminating substance is found or suspected to be a hazardous material, the operator must isolate the package, baggage or cargo and take appropriate steps to eliminate any identified hazard before continuing the transportation of the item by air.

(c) No person may place aboard an aircraft, a package, baggage or cargo that is contaminated with a hazardous material or appears to be leaking.

* * * * *

PART 176—CARRIAGE BY VESSEL

■ 51. The authority citation for part 176 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 52. In § 176.27, paragraph (c)(2) is revised to read as follows:

§ 176.27 Certificate.

* * * * *

(c) * * *

(2) The certification may appear on a shipping paper or on a separate document as a statement, such as ''It is declared that the packing of the container has been carried out in accordance with the applicable provisions [of 49 CFR], [of the IMDG Code], or [of 49 CFR and the IMDG Code].''.

■ 53. In § 176.63, a new paragraph (f) is added to read as follows:

§ 176.63 Stowage locations.

* * * * *

(f) *Stowage of containers on board hatchless container ships* (1) Containers holding a hazardous material may be stowed in or vertically above a hatchless container hold if the following conditions are met:

(1) All hazardous materials are permitted for *under deck* stowage as specified in the Table in § 172.101 of this subchapter; and

(2) The hatchless container hold is in full compliance with the provisions of IMO's ''International Convention for the Safety of Life at Sea (SOLAS),'' Regulation II–2/19 of SOLAS 1974, as amended (incorporation by reference; see § 171.7 of this subchapter), applicable to enclosed container cargo spaces, as appropriate for the cargo transported.

■ 54. In § 176.83, paragraph (f) is revised and a new paragraph (l) is added to read as follows:

§ 176.83 Segregation.

* * * * *

(f) *Segregation of containers on board container vessels:* (1) Except for hatchless container ships, this paragraph applies to the segregation of freight containers that are carried on board container vessels, or on other types of vessels, provided these cargo spaces are properly fitted for permanent stowage of freight containers during transport.

(l) *Segregation of containers on board hatchless container ships:* (1) This paragraph applies to the segregation of containers that are transported on board hatchless container ships provided that the cargo spaces are properly fitted to give permanent stowage of the cargo transport units during transport.

(2) For partly hatchless container ships that have spaces suitable for breakbulk cargo, conventional container stowage, or any other method of stowage, the appropriate requirements of this section apply to the relevant cargo space.

(3) *Segregation Table:* Table § 176.83(l)(3) sets forth the general requirements for segregation of containers on board hatchless container vessels.

(4) In Table § 176.83(l)(3), a container space means a distance of not less than 6 m (20 feet) fore and aft or not less than 2.5 m (8 feet) athwartship.

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TABLE 176.83(I) - SEGREGATION OF CONTAINERS ON BOARD HATCHLESS CONTAINER SHIPS

SEGREGATION REQUIREMENT	VERTICAL			HORIZONTAL						
	CLOSED VERSUS CLOSED	CLOSED VERSUS OPEN	OPEN VERSUS OPEN		CLOSED VERSUS CLOSED		CLOSED VERSUS OPEN		OPEN VERSUS OPEN	
					ON DECK	UNDER DECK	ON DECK	UNDER DECK	ON DECK	UNDER DECK
"AWAY FROM" 1.	ONE ON TOP OF THE OTHER PERMITTED	OPEN ON TOP OF CLOSED PERMITTED OTHERWISE AS FOR "OPEN VERSUS OPEN"	NOT IN THE SAME VERTICAL LINE	FORE AND AFT	NO RESTRICTION	NO RESTRICTION	NO RESTRICTION	NO RESTRICTION	ONE CONTAINER SPACE	ONE CONTAINER SPACE OR ONE BULKHEAD
				ATHWART-SHIPS	NO RESTRICTION	NO RESTRICTION	NO RESTRICTION	NO RESTRICTION	ONE CONTAINER SPACE	ONE CONTAINER SPACE
"SEPARATED FROM" 2.	NOT IN THE SAME VERTICAL LINE	AS FOR "OPEN VERSUS OPEN"		FORE AND AFT	ONE CONTAINER SPACE	ONE CONTAINER SPACE OR ONE BULKHEAD	ONE CONTAINER SPACE	ONE CONTAINER SPACE OR ONE BULKHEAD	ONE CONTAINER SPACE AND NOT IN OR ABOVE SAME HOLD	ONE BULKHEAD
				ATHWART-SHIPS	ONE CONTAINER SPACE	ONE CONTAINER SPACE	TWO CONTAINER SPACES	TWO CONTAINER SPACES	TWO CONTAINER SPACES AND NOT IN OR ABOVE SAME HOLD	ONE BULKHEAD
"SEPARATED BY A COMPLETE COMPARTMENT OR HOLD FROM" 3.				FORE AND AFT	ONE CONTAINER SPACE AND NOT IN OR ABOVE SAME HOLD	ONE BULKHEAD	ONE CONTAINER SPACE AND NOT IN OR ABOVE SAME HOLD	ONE BULKHEAD	TWO CONTAINER SPACES AND NOT IN OR ABOVE SAME HOLD	TWO BULKHEADS
				ATHWART-SHIPS	TWO CONTAINER SPACES AND NOT ABOVE SAME HOLD	ONE BULKHEAD	TWO CONTAINER SPACES AND NOT ABOVE SAME HOLD	ONE BULKHEAD	THREE CONTAINER SPACES AND NOT ABOVE SAME HOLD	TWO BULKHEADS
"SEPARATED LONGITUDINALLY BY AN INTERVENING COMPLETE COMPARTMENT OR HOLD FROM" 4.	PROHIBITED			FORE AND AFT	MINIMUM HORIZONTAL DISTANCE OF 24 M AND NOT IN OR ABOVE SAME HOLD	ONE BULKHEAD AND MINIMUM HORIZONTAL DISTANCE OF 24 M*	MINIMUM HORIZONTAL DISTANCE OF 24 M AND NOT ABOVE SAME HOLD	TWO BULKHEADS	MINIMUM HORIZONTAL DISTANCE OF 24 M AND NOT ABOVE SAME HOLD	TWO BULKHEADS
				ATHWART-SHIPS	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED	PROHIBITED

* Containers not less than 6 m (20 feet) from intervening bulkhead.
Note: All bulkheads and decks must be resistant to fire and liquid.

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■ 55. In § 176.84, in paragraph (b), Table of provisions, nine new entries are added in appropriate numerical order to read as follows:

§ 176.84 Other requirements for stowage and segregation for cargo vessels and passenger vessels.

* * * * *

(b) * * *

Code	Provisions
*	* * * * * *
124	Stow ''separated from'' bromates.
125	Segregation same as for flammable liquids, but also ''away from'' flammable solids.
126	Segregation same as for Class 9, miscellaneous hazardous materials.
127	For packages carrying a subsidiary risk of Class 1 (explosives), segregation same as for Class 1, Division 1.3.
128	Stow in accordance with the IMDG Code, Sub-section 7.1.10.3 (incorporated by reference; see § 171.7 of this subchapter).
129	Stowage Category A applies, except for uranyl nitrate hexahydrate solution for which Category D applies.
130	Stowage Category A applies, except for uranyl nitrate hexahydrate solution, uranium metal hexahydrate solution, uranium metal pyrophoric and thorium metal pyrophoric for which Category D applies.
131	Stowage Category A applies, except for uranyl nitrate hexahydrate solution, uranium metal pyrophoric and thorium metal pyrophoric for which Category D applies, and taking into account any supplementary requirements specified in the transport documents.
132	Stowage A applies, taking into account any supplementary requirements specified in the transport documents.
*	* * * * * *

* * * * *

■ 56. In § 176.140, in paragraph (b), the first sentence is revised to read as follows:

§ 176.140 Segregation from other classes of hazardous materials.

* * * * *

(b) Class 1 (explosive) materials must be segregated from bulk solid dangerous cargoes in accordance with the IMDG Code (incorporated by reference; see § 171.7 of this subchapter).* * *

§ 176.170 [Removed and Reserved]

■ 57. In § 176.170, paragraph (b) is removed and reserved.

■ 58. In § 176.410, paragraph (a)(2) is revised; paragraphs (a)(3), (a)(5) and (a)(6) are removed; and current paragraph (a)(4) is redesignated (a)(3) to read as follows:

§ 176.410 Division 1.5 materials, ammonium nitrate and ammonium nitrate mixtures.

(a) * * *

(2) Ammonium nitrate, Division 5.1 (oxidizer), UN1942.

* * * * *

■ 59. In § 176.415, paragraphs (a) introductory text, (a)(1), (a)(2), (b)(1), (c)(1) and (c)(2) are revised; paragraphs (b)(3), (b)(4) and (c)(5) are removed; and paragraphs (b)(5) and (b)(6) are redesignated (b)(3) and (b)(4), respectively to read as follows:

§ 176.415 Permit requirements for Division 1.5, ammonium nitrates, and certain ammonium nitrate fertilizers.

(a) Except as provided in paragraph (b) of this section, before any of the following material is loaded on or unloaded from a vessel at any waterfront facility, the owner/operator must obtain written permission from the Captain of the Port (COTP).

(1) Ammonium nitrate UN1942, ammonium nitrate fertilizers containing more than 70% ammonium nitrate, or Division 1.5 compatibility group D materials packaged in a paper bag, burlap bag, or other nonrigid combustible packaging, or any rigid packaging with combustible inside packagings,

(2) Any other ammonium nitrate or ammonium nitrate fertilizer not listed in § 176.410(a) or (b).

(b) * * *

(1) Ammonium nitrate, Division 5.1 (oxidizer) UN1942, in a rigid packaging with a noncombustible inside packaging.

* * * * *

(c) * * *

(1) If the material is Explosives, blasting, type E, Division 1.5 compatibility group D, UN0332 in a combustible packaging or in a rigid packaging with a combustible inside packaging, it must be loaded or unloaded at a facility remote from populous areas, or high-value or high-hazard industrial facilities, so that in the event of fire or explosion, loss of lives and property may be minimized;

(2) If the material is a Division 1.5 compatibility group D material in a non-rigid combustible packaging and loaded in a freight container or transport vehicle, it may be loaded or unloaded at a non-isolated facility if the facility is approved by the COTP.

* * * * *

PART 178—SPECIFICATIONS FOR PACKAGINGS

■ 60. The authority citation for part 178 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 61. In § 178.2, paragraph (c)(1)(ii) is revised to read as follows:

§ 178.2 Applicability and responsibility.

* * * * *

(c) * * *

(1) * * *

(ii) With information specifying the type(s) and dimensions of the closures, including gaskets and any other components needed to ensure that the packaging is capable of successfully passing the applicable performance tests and the general packaging requirements in § 173.24 and for transportation by aircraft, if applicable, § 173.27 of this subchapter. This information must include any procedures to be followed, including closure instructions for inner packagings and receptacles, to effectively assemble and close the packaging for the purpose of preventing leakage in transportation. For packagings intended for transportation by aircraft, this information must include relevant guidance to ensure that the packaging, as prepared for transportation, will withstand the pressure differential requirements in § 173.27 of this subchapter.

* * * * *

§ 178.274 [Amended]

■ 62. In § 178.274, in paragraph (j)(6), in the fourth sentence, the wording ''20 cm (8 inches) on at least two sides'' is removed and ''10 cm (4 inches) on at least two sides'' is added in its place.

■ 63. In § 178.705, paragraph (c)(1)(iv)(A) is revised to read as follows:

§ 178.705 Standards for metal IBCs.

* * * * *

(c) * * *

(1) * * *

(iv) * * *

(A) For a reference steel having a product of Rm × Ao = 10,000, where Ao

is the minimum elongation (as a percentage) of the reference steel to be used on fracture under tensile stress (Rm × Ao = 10,000 × 145; if tensile strength is in U.S. Standard units of pounds per square inch), the wall thickness must not be less than:

Capacity (C) in liters [1]	Wall thickness (T) in mm			
	Types 11A, 11B, 11N		Types 21A, 21B, 21N, 31A, 31B, 31N	
	Unprotected	Protected	Unprotected	Protected
C≤1000	2.0	1.5	2.5	2.0
1000<C≤2000	T=C/2000 + 1.5	T=C/2000 + 1.0	T=C/2000 + 2.0	T=C/2000 + 1.5
2000<C≤3000	T=C/2000 + 1.5	T=C/2000 + 1.0	T=C/1000 + 1.0	T=C/2000 + 1.5

* * * * *

■ 64. In § 178.812, paragraph (b)(1) is revised to read as follows:

§ 178.812 Top lift test.

* * * * *

(b) *Special preparation for the top lift test.* (1) Metal, rigid plastic, and composite IBC design types must be loaded to twice the maximum permissible gross mass with the load being evenly distributed.

* * * * *

PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS

■ 65. The authority citation for part 180 continues to read as follows:

Authority: 49 U.S.C. 5101–5127; 49 CFR 1.53.

■ 66. Section 180.350 is revised to read as follows:

§ 180.350 Applicability and definitions.

This subpart prescribes requirements, in addition to those contained in parts 107, 171, 172, 173 and 178 of this subchapter, applicable to any person responsible for the continuing qualification, maintenance, or periodic retesting of an IBC. The following definitions apply:

(a) *Remanufactured IBCs* are metal, rigid plastic or composite IBCs produced as a UN type from a non-UN type, or are converted from one UN design type to another UN design type. Remanufactured IBCs are subject to the same requirements of this subchapter that apply to new IBCs of the same type (also see § 178.801(c)(1) of this subchapter for design type definition).

(b) *Repaired IBCs* are metal, rigid plastic or composite IBCs that, as a result of impact or for any other cause (such as corrosion, embrittlement or other evidence of reduced strength as compared to the design type), are restored so as to conform to the design type and to be able to withstand the design type tests. For the purposes of this subchapter, the replacement of the rigid inner receptacle of a composite IBC with a receptacle conforming to the original manufacturer's specification is considered repair. Routine maintenance of IBCs (see definition in paragraph (c) of this section) is not considered repair. The bodies of rigid plastic IBCs and the inner receptacles of composite IBCs are not repairable.

(c) *Routine maintenance of IBCs* is the routine performance on metal, rigid plastic or composite IBCs of operations such as:

(1) Cleaning;

(2) Removal and reinstallation or replacement of body closures (including associated gaskets), or of service equipment conforming to the original manufacturer's specifications provided that the leaktightness of the IBC is verified; or

(3) Restoration of structural equipment not directly performing a hazardous material containment or discharge pressure retention function so as to conform to the design type (for example, the straightening of legs or lifting attachments), provided the containment function of the IBC is not affected.

■ 67. In § 180.352, paragraphs (d)(1)(i) and (f) are revised and a new paragraph (d)(1)(iv) is added to read as follows:

§ 180.352 Requirements for retest and inspection of IBCs.

* * * * *

(d) * * *

(1) * * *

(i) The repaired IBC conforms to the original design type, is capable of withstanding the applicable design qualification tests, and is retested and inspected in accordance with the applicable requirements of this section;

* * * * *

(iv) The person performing the tests and inspections after the repair must durably mark the IBC near the manufacturer's UN design type marking to show the following:

(A) The country in which the tests and inspections were performed;

(B) The name or authorized symbol of the person performing the tests and inspections; and

(C) The date (month, year) of the tests and inspections.

* * * * *

(f) *Record retention.* The owner or lessee of the IBC must keep records of periodic retests, initial and periodic inspections, and tests performed on the IBC if it has been repaired. Records must include design types and packaging specifications, test and inspection dates, name and address of test and inspection facilities, names or name of any persons conducting tests or inspections, and test or inspection specifics and results. Records must be kept for each packaging at each location where periodic tests are conducted, until such tests are successfully performed again or for at least 2.5 years from the date of the last test. These records must be made available for inspection by a representative of the Department on request.

■ 68. In § 180.605, paragraph (k) is revised to read as follows:

§ 180.605 Requirements for periodic testing, inspection and repair of portable tanks.

* * * * *

(k) *Inspection and test markings.* (1) Each IM or UN portable tank must be durably and legibly marked, in English, with the date (month and year) of the last pressure test, the identification markings of the approval agency witnessing the test, when required, and the date of the last visual inspection. The marking must be placed on or near the metal identification plate, in letters and numerals of not less than 3 mm (0.118 inches) high when on the metal identification plate, and 12 mm (0.47 inches) high when on the portable tank.

(2) Each Specification DOT 51, 56, 57 or 60 portable tank must be durably and legibly marked, in English, with the date (month and year) of the most recent

periodic retest. The marking must be placed on or near the metal certification plate and must be in accordance with § 178.3 of this subchapter. The letters and numerals must not be less than 3 mm (0.118 inches) high when on the metal certification plate, and 12 mm (0.47 inches) high when on the portable tank, except that a portable tank manufactured under a previously authorized specification may continue to be marked with smaller markings if originally authorized under that specification (for example, DOT Specification 57 portable tanks).

* * * * *

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Samuel G. Bonasso,

Acting Administrator.

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