

**DEPARTMENT OF TRANSPORTATION****Pipeline and Hazardous Materials Safety Administration**

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

[Docket No. PHMSA-06-25476 (HM-215)]

RIN 2137-AE16

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

**AGENCY:** Pipeline and Hazardous Materials Safety Administration (PHMSA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** PHMSA proposes to amend the Hazardous Materials Regulations 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. These revisions are necessary to harmonize the Hazardous Materials Regulations with recent changes to the International Maritime Dangerous Goods Code, the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air, and the United Nations Recommendations on the Transport of Dangerous Goods.

**DATES:** Comments must be received by October 16, 2006.

**ADDRESSES:** You may submit comments identified by the docket number (PHMSA-06-25476) by any of the following methods:

- *Federal eRulemaking Portal:* <http://www.regulations.gov>. Follow the online instructions for submitting comments.
- *Web Site:* <http://dms.dot.gov>.

Follow the instructions for submitting comments on the DOT electronic docket site.

- *Fax:* 1-202-493-2251.
- *Mail:* Docket Management System; U.S. Department of Transportation, 400 Seventh Street, SW., Nassif Building, PL-402, Washington, DC 20590-0001.
- *Hand Delivery:* PL-402 on the plaza level of the Nassif Building, 400 Seventh Street, SW., Washington, DC between 9 a.m. and 5 p.m., Monday through Friday, except Federal Holidays.

*Instructions:* All submissions must include the agency name and docket

number or Regulatory Identification Number (RIN) for this notice. For detailed instructions on submitting comments and additional information on the rulemaking process, see the Public Participation heading of the Supplementary Information section of this document. Note that all comments received will be posted, without change, to <http://dms.dot.gov> including any personal information provided. Please see the Privacy Act heading under Regulatory Analyses and Notices.

*Docket:* For access to the docket to read background documents or comments received, go to <http://dms.dot.gov> at any time or to the Docket Management System (see **ADDRESSES**).

**FOR FURTHER INFORMATION CONTACT:** Charles Betts, Office of Hazardous Materials Standards, telephone (202) 366-8553, or Shane Kelley, International Standards, telephone (202) 366-0656, Pipeline and Hazardous Materials Safety Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590-0001.

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**I. Background**

On December 21, 1990, the Research and Special Programs Administration (RSPA), the predecessor agency to the Pipeline and Hazardous Materials Safety Administration (PHMSA, we) published a final rule (Docket HM-181; 55 FR 52402) based on the UN Recommendations on the Transport of Dangerous Goods, to comprehensively revise the Hazardous Materials Regulations (HMR), 49 CFR parts 171 to 180, for harmonization with the international standards. Since publication of the 1990 final rule, we have issued six additional international harmonization final rules, (Dockets

HM-215A, 59 FR 67390; HM-215B, 62 FR 24690; HM-215C, 64 FR 10742; HM-215D, 66 FR 33316; HM-215E, 68 FR 44992; and HM-215G, 69 FR 76044). 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 UN Recommendations are not regulations, but rather are recommendations issued by the UN Committee of Experts on the Transport of Dangerous Goods (TDG) and on the Globally Harmonized System of Classification and Labelling of Chemicals (GHS). 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, including the International Maritime Organization's International Maritime Dangerous Goods Code (IMDG Code), and the International Civil Aviation Organization's Technical Instructions for the Transport of Dangerous Goods by Air (ICAO Technical Instructions).

The harmonization of domestic and international standards becomes increasingly important as the volume of hazardous materials transported in international commerce grows. Harmonization serves to facilitate international transportation, while maintaining appropriate protection of people, property, and the environment. Although 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 its overall impact on transportation safety and the economic implications associated with its adoption into the HMR. Our goal is to harmonize without diminishing the level of safety currently provided by the HMR and without imposing undue burdens on the regulated public. In our efforts to continue aligning the HMR with international requirements, in this NPRM, we are proposing to incorporate changes into the HMR based on the Fourteenth revised edition of the UN Recommendations, Amendment 33 to the IMDG Code, and the 2007-2008 ICAO Technical Instructions which become effective January 1, 2007. We are also addressing petitions for rulemaking concerning harmonization with international standards and additional measures to facilitate international transportation.

## II. Sunset Provision

To assure the HMR account for new technologies and updated business practices, PHMSA is considering whether certain requirements proposed in this NPRM should be afforded a "sunset" provision. If we adopt such a provision, certain amendments adopted through this rulemaking would expire after a fixed amount of time (e.g., 10 years) from the publication date of the final rule.

Harmonizing the HMR with international transportation requirements facilitates the transportation of hazardous materials in international commerce by eliminating the need for shippers and carriers to comply with two different sets of regulations. Certain standards that we are proposing to adopt by reference likely will be updated periodically in response to changes in international standards or may be replaced by other more relevant or technically superior standards. Future changes to these standards would have to consider whether to retain or extend the sunset date. If we choose to do nothing, a sunset provision would mean the HMR would revert to the language and requirements in effect before the issuance of the final rule. We are requesting comments on whether certain amendments should be tied to a sunset provision.

## III. Overview of Proposed Changes in This NPRM

In this NPRM, we are proposing the following amendments to the HMR:

- Adoption of a single shipping paper description sequence (identification number, proper shipping name, hazard class or division, packing group). Currently, the HMR permit the shipping paper description sequence to start with either the identification number or the proper shipping name.
- Requirement to indicate the net quantity of hazardous material per package on the shipping paper if transportation is by aircraft. The HMR do not currently require this information on a shipping paper.
- Incorporation by reference of the updated ICAO Technical Instructions, IMDG Code, and UN Recommendations.
- Amendments to the Hazardous Materials Table (HMT) to 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 vessels stowage provisions.
- Revision of the ORGANIC PEROXIDE label and placard.

- Revision of the classification criteria for PG III flammable liquids.
- Revision of the classification criteria and packing group assignment for Division 6.1 materials.
- Requirements for the transportation of fuel cells containing flammable liquid.
- Adoption of a one-packet limit for matches carried by airline passengers or crew members.

## IV. Overview of International Standards Not Being Considered for Adoption in This NPRM

This NPRM proposes changes to the HMR based on amendments to the Fourteenth revised edition of the UN Recommendations, Amendment 33 to the IMDG Code, and the 2007–2008 ICAO Technical Instructions, which become effective January 1, 2007. However, we are not proposing to adopt all of the amendments to those documents into the HMR. In many cases, amendments to the international regulations have not been adopted because the framework or structure of the HMR makes adoption unnecessary. In other cases, we have handled, or will be handling, the amendments in separate rulemaking proceedings. For example, we addressed requirements related to the transportation of infectious substances in a final rule published June 2, 2006, under Docket HM–226A (71 FR 32244). Similarly, we adopted amendments relating to the use of UN cylinders and pressure vessels in a final rule published June 12, 2006, under Docket HM–220E (71 FR 33858).

If we have inadvertently omitted an amendment in this NPRM, we will attempt to include the omission in the final rule. However, our ability to make changes in a final rule is limited by requirements of the Administrative Procedure Act. In some instances, we can adopt a provision inadvertently omitted in the NPRM if it is clearly within the scope of changes proposed in the notice, does not require substantive changes from the international standard on which it is based, and imposes minimal or no cost impacts on persons subject to the requirement. Otherwise, in order to provide opportunity for notice and comment, the change must be proposed in an NPRM.

One of the goals of this rulemaking is to continue to maintain consistency between the HMR and the international requirements. We are not striving to make the HMR identical to the international regulations but rather to remove or avoid potential barriers to international transportation.

Below is a listing of those significant amendments to the international

regulations that we are not proposing to adopt in this NPRM with a brief explanation of why the amendment was not included:

- *Environmentally hazardous substances.* The UN Recommendations have not yet been adopted by ICAO and IMO. These changes will be considered in a separate rulemaking proceeding.
- *Hazardous materials security.* Like the HMR, the UN Recommendations require carriers, consignors and others engaged in the transport of "high consequence" dangerous goods to adopt, implement and comply with a security plan that addresses the transportation risks associated with these materials. A major difference between the HMR and the UN Recommendations is the quantity of hazardous material that triggers the requirement for a security plan. We are analyzing the differences and, based on our conclusions, will consider a separate rulemaking to address this issue.
- *Requirements for radioactive materials.* We are not proposing to adopt provisions pertaining to the transportation of Class 7 (radioactive) materials. Amendments to requirements pertaining to the transportation of Class 7 materials are based on changes contained in the International Atomic Energy Agency (IAEA) publication, "IAEA Safety Standards Series: Regulations for the Safe Transport of Radioactive Materials." Due to their complexity, these changes will be addressed in a separate rulemaking.
- *Default classification system for fireworks.* We are not proposing to adopt these provisions of the UN Recommendations because we do not believe the UN classification system provides an equivalent level of safety to the current HMR requirements. Under the HMR, fireworks must be classed and approved by the Associate Administrator for Hazardous Materials Safety; the approvals are based on American Pyrotechnic Association Standard 87–1.
- *Fuel cells.* We are not proposing to adopt provisions for the carriage of fuel cell cartridges in the passenger cabin of a passenger aircraft that were adopted by ICAO. Also, we are not proposing to adopt the packaging provisions for the transport of "Hydrogen in a metal hydride storage system," (UN3468), as adopted by ICAO. Currently, the HMR allow transportation of these storage systems by motor vehicle and rail under the terms of an exemption and by motor vehicle, rail, cargo vessel and cargo aircraft with approval of the Associate Administrator. These issues will be

considered in a separate rulemaking proceeding.

• *Marking of Limited Quantity shipments.* The ICAO Technical Instructions adopted a marking requirement for packages containing a limited quantity of hazardous material that consists of the identification number of the material placed within a square-on-point border. The marking is anticipated to become effective January 1, 2009. Except for transportation by aircraft, this marking is currently authorized under the HMR as an alternative to marking the proper shipping name on the package; we are allowing continued use of this marking to minimize transportation costs and provide flexibility.

**V. Section-by-Section Review**

*Part 171*

Section 171.7

Section 171.7 lists the standards incorporated by reference into the HMR. We propose to update the incorporation by reference materials for the ICAO Technical Instructions, the IMDG Code, the UN Recommendations and the UN Manual of Tests and Criteria. The updated editions of these standards become effective January 1, 2007.

The standards would be updated as follows:

- The ICAO Technical Instructions, 2007–2008 Edition.
- The IMDG Code, Amendment 33.
- The UN Recommendations, Fourteenth revised edition.
- The UN Manual of Tests and Criteria, Fourth revised edition (2003), and Addendum 2, (2004).

Section 171.14

This section lists specific transition periods for certain provisions adopted into the HMR. Paragraph (b) lists transitional provisions related to revised placarding requirements. In this NPRM, we propose to remove paragraph (b) because the transitional period has expired.

Paragraph (d) of this section specifies transition provisions for previously

adopted amendments intended to harmonize the HMR with international standards. We are proposing revisions to this paragraph to provide specific transitional provisions for certain of the amendments proposed in this NPRM. We are proposing an effective date of January 1, 2007, and a mandatory compliance date of January 1, 2008. We propose to permit voluntary compliance as of January 1, 2007, to correspond with the effective implementation dates of the 2007–2008 ICAO Technical Instructions and Amendment 33 of the IMDG Code. This authorization would allow shippers to prepare their international shipments in accordance with international standards that will become effective on January 1, 2007.

Paragraph (e) of this section contains an outdated transition provision. In this NPRM, we propose to replace the outdated transition provision with a new paragraph (e) that would permit use for domestic shipments of the shipping description sequences in effect on December 31, 2006, until January 1, 2009. See the § 172.202 preamble discussion for a complete explanation of the shipping description sequence issue.

Paragraph (f) of this section contains an outdated transitional provision. We propose to revise paragraph (f) by removing the current provision and adding a transitional provision to allow continued display of Division 5.2 labels and placards conforming to the specifications in effect on December 31, 2006, until January 1, 2011. See the §§ 172.407 and 172.427 preamble discussions for a complete explanation of this issue.

In new paragraph (g), we are proposing to allow continued use of the Class 3 and Division 6.1 classification criteria and packing group assignments in effect on December 31, 2006, until January 1, 2012. See §§ 173.120 and 174.133 preamble discussions for a complete explanation of this issue.

*Part 172*

Section 172.101

Section 172.101 contains the Hazardous Materials Table (HMT) and explanations for each of the columns in the HMT. Paragraph (d) of this section addresses column 3 of the HMT, which contains the hazard class or division for each specific material listed in the HMT. Paragraph (d)(4) addresses entries classed as combustible liquids. We are proposing to revise paragraph (d)(4) to revise the lower limit for classing a material as a combustible liquid from 60.5 °C (141 °F) to 60 °C (140 °F). This is consistent with recent changes to the classification of flammable liquids based on the GHS and adoption into the UN Recommendations.

*The § 172.101 Hazardous Materials Table (HMT):* In the § 172.101 Hazardous Materials Table (HMT), we are proposing to make various amendments. Readers should review all changes for a complete understanding of the proposed Table amendments. For purposes of the Government Printing Office’s typesetting procedures, proposed 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 proposed revisions to the proper shipping names, will appear as a “remove” and “add.” Under this NPRM, the proposed amendments to the HMT for the purpose of harmonizing with international standards, unless otherwise stated, include, but are not limited to the following:

1. We propose to correct Column (7) Special provisions of the HMT by removing Special provision 101 which requires the name of the particular substance or article to be specified. With the introduction of the letter “G” for these materials in Column (1), requiring the n.o.s. and generic proper shipping names to be supplemented with the technical name of the hazardous material, Special provision 101 becomes obsolete and duplicative. The affected entries are as follows:

UN0349 .....	Articles, explosive, n.o.s.
UN0350 .....	Articles, explosive, n.o.s.
UN0351 .....	Articles, explosive, n.o.s.
UN0352 .....	Articles, explosive, n.o.s.
UN0353 .....	Articles, explosive, n.o.s.
UN0354 .....	Articles, explosive, n.o.s.
UN0355 .....	Articles, explosive, n.o.s.
UN0356 .....	Articles, explosive, n.o.s.
UN0462 .....	Articles, explosive, n.o.s.
UN0463 .....	Articles, explosive, n.o.s.
UN0464 .....	Articles, explosive, n.o.s.
UN0465 .....	Articles, explosive, n.o.s.
UN0466 .....	Articles, explosive, n.o.s.
UN0467 .....	Articles, explosive, n.o.s.
UN0468 .....	Articles, explosive, n.o.s.

UN0469	Articles, explosive, n.o.s.
UN0470	Articles, explosive, n.o.s.
UN0471	Articles, explosive, n.o.s.
UN0472	Articles, explosive, n.o.s.
UN0382	Components, explosive train, n.o.s.
UN0383	Components, explosive train, n.o.s.
UN0384	Components, explosive train, n.o.s.
UN0461	Components, explosive train, n.o.s.
UN0357	Substances, explosive, n.o.s.
UN0358	Substances, explosive, n.o.s.
UN0359	Substances, explosive, n.o.s.
UN0473	Substances, explosive, n.o.s.
UN0474	Substances, explosive, n.o.s.
UN0475	Substances, explosive, n.o.s.
UN0476	Substances, explosive, n.o.s.
UN0477	Substances, explosive, n.o.s.
UN0478	Substances, explosive, n.o.s.
UN0479	Substances, explosive, n.o.s.
UN0480	Substances, explosive, n.o.s.
UN0481	Substances, explosive, n.o.s.
UN0485	Substances, explosive, n.o.s.
UN0482	Substances, explosive, very insensitive, n.o.s. or Substances, EVI, n.o.s.

2. Amendment 32 of the IMDG Code added a new segregation group for alkalis. For consistency with international regulations and in

response to a petition from Horizon Lines (P-1470), we are proposing to revise the Vessel Stowage Provisions in Column (10B) by adding Segregation

Code "52" (Stow "Separated from" acids) to certain entries. The affected entries are as follows:

UN2733	Amines, flammable, corrosive, n.o.s. or Polyamines, flammable, corrosive, n.o.s.
UN2671	Aminopyridines ( <i>o</i> -; <i>m</i> -; <i>p</i> -).
UN1005	Ammonia, anhydrous.
UN3318	Ammonia solution, <i>relative density less than 0.880 at 15 degrees C in water, with more than 50 percent ammonia.</i>
UN2672	Ammonia solutions, <i>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.</i>
UN2073	Ammonia solutions, <i>relative density less than 0.880 at 15 degrees C in water, with more than 35 percent but not more than 50 percent ammonia.</i>
UN3028	Batteries, dry, containing potassium hydroxide solid, <i>electric, storage.</i>
UN2795	Batteries, wet, filled with alkali, <i>electric storage.</i>
UN2797	Battery fluid, alkali.
UN2682	Caesium hydroxide.
UN2681	Caesium hydroxide solution.
UN1719	Caustic alkali liquids, n.o.s.
UN1160	Dimethylamine solution.
UN2379	1, 3-Dimethylbutylamine.
UN2382	Dimethylhydrazine, symmetrical.
UN1163	Dimethylhydrazine, unsymmetrical.
UN3253	Disodium trioxosilicate.
UN2491	Ethanolamine or Ethanolamine solutions.
UN2270	Ethylamine, aqueous solution with <i>not less than 50 percent but not more than 70 percent ethylamine.</i>
UN1604	Ethylenediamine.
UN2386	1-Ethylpiperidine.
UN2029	Hydrazine, anhydrous.
UN3293	Hydrazine, aqueous solution with <i>not more than 37 percent hydrazine, by mass.</i>
UN2030	Hydrazine, aqueous solutions, with <i>more than 37 percent hydrazine, by mass.</i>
UN2680	Lithium hydroxide.
UN2679	Lithium hydroxide, solution.
UN1235	Methylamine, aqueous solution.
UN1244	Methylhydrazine.
UN2399	1-Methylpiperidine.
UN1813	Potassium hydroxide, solid.
UN1814	Potassium hydroxide, solution.
UN2033	Potassium monoxide.
UN1922	Pyrrolidine.
UN2678	Rubidium hydroxide.
UN2677	Rubidium hydroxide solution.
UN1907	Soda lime with <i>more than 4 percent sodium hydroxide.</i>
UN1819	Sodium aluminate, solution.
UN2318	Sodium hydrosulfide, with <i>less than 25 percent water of crystallization.</i>
UN1823	Sodium hydroxide, solid.
UN1824	Sodium hydroxide solution.
UN1825	Sodium monoxide.
UN1849	Sodium sulfide, hydrated with <i>not less than 30 percent water.</i>
UN2320	Tetraethylenepentamine.

UN3073 ..... Vinylpyridines, stabilized.

3. The entry "Aerosols, non-flammable, (each not exceeding 1 L capacity)," UN1950, would be revised by adding vessel storage location code "A" in Column (10A). This code was inadvertently removed in a final rule published under Docket HM-189Y (70 FR 56084; September 23, 2005).

4. The entry "Antimony trichloride, solid," UN1733, PG II, would be revised by adding Special provisions T3 and TP33. Special provision T3 specifies the applicable minimum test pressure, the minimum shell thickness, bottom opening requirements and pressure relief requirements when transporting this material in a UN portable tank. Special provision TP33 specifies requirements applicable to the transportation of this material in IM and UN Specification portable tanks.

5. The entry, "Articles, explosive, extremely insensitive or Articles, EEI," UN0486, would be revised by removing Special provision 101 which requires the name of the particular substance or article to be specified.

6. The entry "Benzyl bromide," UN1737, PG II, would be revised by removing the reference to § 173.153 "Exceptions for Division 6.1 (poisonous materials)" in Column (8A).

7. The entry "Benzyl chloride," UN1738, PG II, would be revised by removing the reference to § 173.153 "Exceptions for Division 6.1 (poisonous materials)" in Column (8A).

8. In accordance with changes in the Fourteenth revised edition of the UN Recommendations, we propose to remove the following entries:

- The entry "Carbon dioxide and nitrous oxide mixtures," UN1015;
- The entry "Carbon dioxide and oxygen mixtures, compressed," UN1014; and
- The entry "Carbon monoxide and hydrogen mixture, compressed," UN2600.

9. The entry, "Charges, shaped, flexible, linear," UN0288, would be revised by removing Special provision 101, which requires the name of the particular substance or article to be specified.

10. The entry "Chlorosilanes, corrosive, n.o.s.," UN2987, PG II, would be revised by removing the reference to § 173.154 "Exceptions for Class 8 (corrosive materials)" in Column (8A).

11. The entry "Chlorosilanes, flammable, corrosive, n.o.s.," UN2985, PG II, would be revised by removing the reference to § 173.150 "Exceptions for Class 3 (flammable) and combustible liquids" in Column (8A).

12. The entry "Chlorosilanes, toxic, corrosive, n.o.s.," UN3361, PG II, would be revised by removing the reference to § 173.153 "Exceptions for Division 6.1 (poisonous materials)" in Column (8A).

13. The entry "Chlorosilanes, toxic, corrosive, flammable, n.o.s.," UN3362, PG II, would be revised by removing the reference to § 173.153 "Exceptions for Division 6.1 (poisonous materials)" in Column (8A).

14. The entry "Chromium trioxide, anhydrous," UN1463, Column (6) would be revised by adding the Division 6.1 subsidiary hazard labeling requirement.

15. The entry "Compressed gas, n.o.s.," UN1956, would be revised by adding Special provision 77. Special provision 77 requires, for domestic transportation, a Division 5.1 subsidiary risk label when a carbon dioxide and oxygen mixture contains more than 23.5% oxygen.

16. The entry, "Contrivances, water-activated, with burster, expelling charge or propelling charge," UN0248, would be revised by removing Special provision 101, which requires the name of the particular substance or article to be specified. In addition, the letter "G" would be added to Column (1), requiring the proper shipping name to be supplemented with the technical name of the hazardous material.

17. The entry, "Contrivances, water-activated, with burster, expelling charge or propelling charge," UN0249, would be revised by removing Special provision 101, which requires the name of the particular substance or article to be specified. In addition, the letter "G" would be added to Column (1), requiring the proper shipping name to be supplemented with the technical name of the hazardous material.

18. The entry "Corrosive liquid, acidic, inorganic, n.o.s.," UN3264, PG II, would be revised by removing Special provision A6. Special provision A6 specifies that for combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings. Special provision A6 applies only to the PG I entry of this material.

19. The proper shipping name for the entry "Crotonaldehyde, Stabilized," UN1143, would be revised to read "Crotonaldehyde or Crotonaldehyde, stabilized" and to add proposed new Special provision 175. New Special provision 175 specifies this material is required to be stabilized when in concentrations of not more than 99%.

The revision appears as a "Remove/Add" in this rulemaking.

20. The proper shipping name for the entry "Crotonic acid, liquid," UN2823, would be corrected to read "Crotonic acid, liquid" and the Identification Number would be revised to read "UN3472." This revision appears as a "Remove/Add" in this rulemaking.

21. The proper shipping name for the entry "Crotonic acid, solid," UN2823, would be corrected to read "Crotonic acid, solid," UN2823. This correction appears as a "Remove/Add" in this rulemaking.

22. In accordance with the ICAO Technical Instructions, the entry "Dangerous Goods in Machinery or Dangerous Goods in Apparatus," UN 3363, would be revised by adding quantity limits for transportation by aircraft. The quantity limits will be specified in a new Special provision A105.

23. The entry "Ethyltrichlorosilane," UN1196, PG II, would be revised by removing the reference to § 173.150 "Exceptions for Class 3 (flammable) and combustible liquids" in Column (8A).

24. The entry "Formic acid," UN1779, would be revised to read "Formic acid with more than 85% acid by mass" and the Class 3 subsidiary hazard would be added in Column (6). This revision appears as a "Remove/Add" in this rulemaking.

25. A new entry, "Formic acid with not less than 10% but not more than 85% acid by mass," UN3412, would be added.

26. A new entry, "Formic acid with not less than 5% but less than 10% acid by mass," UN3412, would be added.

27. A new entry, "Fuel cell cartridges containing flammable liquids," UN3473, would be added.

28. The entry "Hydrazine aqueous solutions, with more than 37% hydrazine, by mass" UN2030, PG I, would be revised by removing Special provision 151. Special provision 151 specifies that if this material meets the definition of a flammable liquid in § 173.120 of the HMR, a FLAMMABLE LIQUID label is required and the basic description on the shipping paper must indicate the Class 3 subsidiary hazard. Changes to the Fourteenth revised edition of the UN Recommendations removed this requirement. Shipping paper and labeling requirements for materials with subsidiary hazards are addressed in §§ 172.202 and 172.402, respectively. 28a. The entry "Hydrogen in a metal hydride storage system,"

UN3468, would be revised by amending Column (9B) to authorize 100 kg gross.

29. The entry "Hydrogen peroxide and peroxyacetic acid mixtures, stabilized *with acids, water, and not more than 5 percent peroxyacetic acid*," UN3149, would be revised by adding Special provision IP5. When this material is transported in an IBC, Special provision IP5 specifies the IBC must have a device to allow venting.

30. The entry "Hydrogen peroxide, aqueous solutions *with more than 40 percent but not more than 60 percent hydrogen peroxide (stabilized as necessary)*," UN2014, would be revised by adding Special provision IP5. When this material is transported in an IBC, Special provision IP5 specifies the IBC must have a device to allow venting.

31. The entry "Hydrogen peroxide, aqueous solutions *with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)*," UN2014, would be revised by adding Special provision IP5. When this material is transported in an IBC, Special provision IP5 specifies the IBC must have a device to allow venting.

32. The entry "Hydrogen peroxide, aqueous solutions *with not less than 8 percent but less than 20 percent hydrogen peroxide (stabilized as necessary)*," UN2984, would be revised by adding Special provision IP5. When this material is transported in an IBC, Special provision IP5 specifies the IBC must have a device to allow venting.

33. The entry "Hydrogen peroxide, stabilized or Hydrogen peroxide aqueous solutions, stabilized *with more than 60 percent hydrogen peroxide*," UN2015, would be revised by removing Special provision T10 and adding Special provision T9. When this material is transported in a UN portable tank, Special provision T10 requires the UN portable tank pressure relief device to comply with the requirements specified in § 178.275(g)(3) of the HMR. The proposed addition of Special provision T9 would remove this requirement.

34. For the entry "Hydrogen difluorides, n.o.s.," UN1740, PG II and III, the proper shipping name would be revised by to read "Hydrogen difluorides, solid, n.o.s." This revision appears as a "Remove/Add" in this rulemaking.

35. A new entry "Hydrogen difluorides, solution, n.o.s.," UN3471, PG II and III, would be added.

36. The entry "Hydroquinone, solid," UN2662, would be removed.

37. The entry "Hydroquinone solution," UN3435, would be removed.

38. The entry "Hypochlorite solutions," UN1791, PG II, would be

revised by adding Special provision IP5. When this material is transported in an IBC, Special provision IP5 specifies the IBC must have a device to allow venting.

39. For the entry "Lead phosphite, dibasic," UN2989, PG II, the quantity limitations in Columns (9A) and (9B) would be revised to read 15 kg and 50 kg, respectively.

40. For the entry "Lead phosphite, dibasic," UN2989, PG III, the quantity limitations in Columns (9A) and (9B) would be revised to read 25 kg and 100 kg, respectively.

41. The entry "Methylphenyldichlorosilane," UN2437, PG II, would be revised by removing the reference to § 173.154 "Exceptions for Class 8 (corrosive materials)" in Column (8A).

42. The entry "Motor fuel anti-knock mixtures," UN1649, would be corrected by removing the subsidiary hazard label requirement in Column (6).

43. The entry "Organometallic substance, solid, pyrophoric," UN3391, PG I, would be revised by correcting the Column (8B) Non-bulk packaging entry "181" to read "187."

44. The entry "Organometallic substance, solid, pyrophoric, water-reactive," UN3393, PG I, would be revised by correcting the Column (8B) Non-bulk packaging entry "181" to read "187."

45. A new entry, "Paint, corrosive, flammable (*including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base*)," UN3470, PG II, would be added.

46. A new entry "Paint, flammable, corrosive (*including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base*)," UN3469, PG I, II, and III, would be added.

47. The entry "Paint *including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base*," UN1263, would be revised by adding the following Special provisions to the PG I, II, and III entries, respectively:

—TP27 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

—TP28 to specify that when this material is transported in an IM or UN

Specification portable tank, a portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

—TP29 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

48. The entry "Paint or Paint related materials," UN3066, would be revised by adding the following Special provisions to the PG II and III entries, respectively:

—TP28 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

—TP29 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

49. A new entry, "Paint related material, corrosive, flammable (*including paint thinning or reducing compound*)," UN3470, PG II, would be added.

50. A new entry, "Paint related material, flammable, corrosive (*including paint thinning or reducing compound*)," UN3469, PG I, II, and III would be added.

51. The entry "Paint related material *including paint thinning, drying, removing, or reducing compound*," UN1263, would be revised by adding the following Special provisions to the PG I, II, and III entries, respectively:

—TP27 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

—TP28 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

—TP29 to specify that when this material is transported in an IM or UN Specification portable tank, a portable tank having a minimum test pressure of 1.5 bar (150.0 kPa) may be used provided the calculated test pressure is 1.5 bar or less based on the maximum allowable working pressure of the material, as defined in § 178.275 of the HMR, where the test pressure is 1.5 times the maximum allowable working pressure.

52. The entry “Plastic molding compound in dough, sheet or extruded rope form evolving flammable vapor,” UN3314, PG III, would be revised by removing vessel stowage location A and adding location E in Column (10A), and by adding Vessel Stowage provisions 19, 25 and proposed new Vessel Stowage provision 144 in Column (10B).

53. The entry “Polymeric beads, expandable, evolving flammable vapor,” UN2211, PG III, would be revised by removing stowage location A and adding location E in Column (10A), and by adding Vessel Stowage provisions 19, 25 and proposed new Vessel Stowage provision 144 in Column (10B).

54. For the entry “Propionic acid,” UN1848, the proper shipping name would be revised to read, “Propionic acid with not less than 10% and less than 90% acid by mass.” This revision appears as a “Remove/Add” in this rulemaking.

55. A new entry, “Propionic acid with not less than 90% acid by mass,” UN3463, would be added.

56. The entry “Rare gases mixtures, compressed,” UN1979, would be removed.

57. The entry “Rare gases and oxygen mixtures, compressed,” UN1980, would be removed.

58. The entry “Rare gases and nitrogen mixtures, compressed,” UN1981, would be removed.

59. The proper shipping name “Regulated medical waste,” UN3291, would be removed and a new proper shipping name “Regulated medical waste, n.o.s. or Clinical waste unspecified, n.o.s. or (BIO) Medical waste, n.o.s.,” UN3291, would be added in its place.

60. For the international entry for “Sulfur,” UN1350, the quantity limitations in Columns (9A) and (9B) would be revised to read 25 kg and 100 kg, respectively.

61. The entry “Trimethylchlorosilane,” UN1298, PG II, would be revised by removing the reference to § 173.150 “Exceptions for Class 3 (flammable) and combustible liquids” in Column (8A).

Also, see § 172.102 for additional HMT amendments.

#### Appendix B to § 172.101

Appendix B to § 172.101 lists Marine Pollutants regulated under the HMR. For the entry “Copper chloride” we are proposing to add the designation “PP” to indicate that copper chloride is a severe marine pollutant. We are also proposing to correct an oversight by removing the entries “Alcohol C–13—C–15 poly (1–6) ethoxylate” and “1,2-Dichlorobenzene.” Removal of the entry “Alcohol C–13—C–15 poly (1–6) ethoxylate” was overlooked in a final rule published under Docket HM–215G (69 FR 76044; December 20, 2004) and removal of the entry “1,2-Dichlorobenzene” was overlooked in a final rule published under Docket HM–215D (66 FR 33316; June 21, 2001).

#### Section 172.102

Section 172.102 lists a number of special provisions applicable to the transportation of specific hazardous materials. Special provisions contain packaging provisions, prohibitions, and exceptions applicable to particular quantities or forms of hazardous materials. For consistency with international standards, we propose to amend § 172.102, Special provisions, as follows:

- Special provision 15 specifies the types of materials and packaging requirements for chemical kits and first aid kits. We propose to revise Special provision 15 to list examples that may be described as “Chemical kits” and “First aid kits.”

- Special provision 47 specifies requirements for mixtures of non-hazardous solids and flammable liquids. In accordance with the UN Recommendations, Special provision 47

would be revised to specify that, in addition to sealed packets, articles containing less than 10 mL of a Class 3 Packing Group II or III liquid absorbed into a solid material would be excepted from the HMR provided there is no free liquid in the packet.

- Special provision 77 applies to use of Division 5.1 subsidiary risk label. We propose to revise this special provision for consistency with the wording in the UN Recommendations. As proposed, Special provision 77 would no longer apply only to “domestic transportation.” Further, we propose to clarify that a Division 5.1 label is required if other oxidizing gases are present. Also, the provision would be applied to the entry “Compressed gas, n.o.s.,” UN1956, which is the most appropriate description for mixtures currently described as “Carbon dioxide and oxygen mixtures, compressed.” In this NPRM, we are proposing to remove the entry for “Carbon dioxide and oxygen mixtures, compressed,” which is consistent with its removal from the UN Recommendations.

- Special provision 146 would be amended to authorize the domestic classification of a material as environmentally hazardous if it is designated as such by foreign competent authorities. The provision as currently worded may be interpreted to only allow such classification for international shipments. Due to current differences in criteria for the classification of environmentally hazardous substances world-wide, we believe the amended provision will afford additional flexibility to industry and reduce shipping costs by allowing both domestic and international shipments to be treated identically.

- Special provision 147 applies to non-sensitized emulsions, suspensions and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use. In accordance with the UN Recommendations, this special provision would be revised to specify the composition of mixtures for suspensions and gels and to specify these substances be tested in accordance with Test Series 8 of the UN Manual of Tests and Criteria.

- Special provision 166 authorizes non-friable, tablet form calcium hypochlorite, dry or hydrated, to be transported as a Packing Group III material. In accordance with the UN Recommendations, we propose to revise Special provision 166 to remove the authorization for “hydrated” non-friable tablet forms of calcium hypochlorite to be transported as a PG III material.

- A new Special provision 175 would be added to require stabilization for certain substances when transported in concentrations of not more than 99%.

- Special provision 101 would be removed. This special provision requires the name of the particular substance or article to be specified. With the introduction of the letter "G" in Column (1), which requires the n.o.s. and generic proper shipping names to be supplemented with the technical name of the hazardous material, Special provision 101 becomes obsolete.

- A new Special provision A105 would be added to specify the quantity of hazardous materials allowed in equipment or apparatus.

#### Section 172.202

Section 172.202 establishes requirements for shipping descriptions on shipping papers. Currently, the basic description of a hazardous material consists of the proper shipping name, hazard class, ID number and packing group, in that order. The HMR also authorize an alternative description sequence, which lists the identification number first, followed by the proper shipping name, hazard class, and packing group. Beginning January 1, 2007, the alternative shipping description sequence will be mandatory on shipping documents prepared according to the ICAO Technical Instructions and the IMDG Code. In this NPRM, we propose to adopt the alternative shipping description sequence. We are also proposing a 2-year transition period to allow offerors sufficient time to convert to the new shipping description sequence. Readers are invited to comment on this proposal, especially on the length of the transition period.

The description of a hazardous material on a shipping paper must include the total quantity of hazardous material (by mass or volume) covered by the description (*see* § 172.202(a)(5)). The majority of quantity limitations set forth for transportation by aircraft, in Columns (9A) and (9B), are "net" quantities. Section 175.75 limits the quantity of hazardous materials, expressed in net mass, aboard an aircraft. To facilitate compliance with the aircraft operator's requirements, we are proposing that, for transportation by aircraft, the total quantity per package be shown, expressed as net mass, except as otherwise specified. For example: UN1263, Paint, 3, PG II, 5 fiberboard boxes x 5 L each

Different size packages containing different quantities of the same hazardous material must be clearly identified. For example:

UN 1263, Paint, 3, PG II, 5 fiberboard boxes x 5 L, 6 fiberboard boxes x 10 L  
Where the letter "G" follows the quantity in Column (9A) or (9B), the gross mass must be indicated, rather than the net quantity.

Also, we are proposing the following additional requirements:

- For empty uncleaned packaging, only the number and type of packaging must be shown;
- For chemical kits and first aid kits, the total net mass of hazardous materials must be shown. Where a kit contains solids and/or liquids, the net mass of liquids within the kit is to be calculated on a 1 to 1 basis, i.e., 1 liter equals 1 kilogram;
- For dangerous goods in machinery or apparatus, the individual total quantities of dangerous goods in solid, liquid or gaseous state, contained in the article must be shown;
- For dangerous goods transported in a salvage packaging, an estimate of the quantity of dangerous goods per package must be shown;
- For cylinders, the total quantity may be indicated by the number of cylinders, for example, "10 cylinders;"
- For items where "No Limit" is shown in Column (9A) or (9B) of the HMT, the quantity shown should be the net mass or volume of the material, except for UN2800, UN2807, UN3072, UN3166 and UN3173, where the quantity should be the gross mass of the article.

#### Section 172.312

Section 172.312 addresses marking requirements for liquid hazardous materials in non-bulk packagings. Specifically, the packaging must be marked with orientation arrows to indicate how the package should be oriented during transportation; the arrows indicate which end of the package is "up." Currently the HMR require orientation markings only on a non-bulk combination package with inner packagings that contain a liquid hazardous material, unless specifically excepted. In this NPRM, we propose to revise paragraph (a) to require orientation markings on single packagings fitted with vents and on open cryogenic receptacles intended for the transport of refrigerated liquefied gases. Also, we propose to require the size of the marking to be proportioned so that it is clearly visible in relation to the size of the package, and to require the color of the arrows to be either black or red on a suitable contrasting background. Currently, the HMR do not specify either size or color

requirements. Finally, we are proposing to add a new paragraph (c)(7) to except Class 7 radioactive materials in type A, IP-2, IP-3, B(U), B(M) or C packages from the orientation marking requirement.

#### Sections 172.407 and 172.427

Section 172.407 establishes specifications for package labels. Section 172.427 establishes requirements for the ORGANIC PEROXIDE label. In accordance with the UN Recommendations, we are proposing to revise the ORGANIC PEROXIDE label. The new label will reflect the fact that organic peroxides are highly flammable and will enable transport workers to readily distinguish peroxides from oxidizers with which they are generally not compatible. We also propose to allow labels meeting the specifications in effect on December 31, 2006, to continue to be displayed until January 1, 2011 (*see* § 171.14). Adoption of the redesigned label will eliminate the current requirement in § 172.402 for a package containing an organic peroxide to bear a FLAMMABLE LIQUID subsidiary label in addition to the ORGANIC PEROXIDE primary hazard class label.

#### Section 172.552

Section 172.552 establishes specific requirements for the ORGANIC PEROXIDE placard. In accordance with the UN Recommendations, in paragraph (b), we are proposing to revise the ORGANIC PEROXIDE placard. The new placard will reflect the fact that organic peroxides are highly flammable and will enable transport workers to readily distinguish peroxides from oxidizers with which they are generally not compatible. We also propose to allow placards meeting the specifications in effect on December 31, 2006, to continue to be displayed until January 1, 2011 (*see* § 171.14).

#### Part 173

##### Section 173.9

Section 173.9 sets forth requirements for transporting cargo that has been fumigated or is undergoing fumigation. Such shipments must have a FUMIGANT marking. As specified in this section, the FUMIGANT marking includes an indication of the material used for fumigation and the date and time the fumigant was applied. Currently, transport vehicles or freight containers containing fumigated cargoes are not required to show the date the fumigant transport vehicle or freight container was ventilated to remove harmful concentration of fumigant gas.

To minimize the possibility of an individual entering a fumigated transport vehicle or freight container prematurely, we are proposing to add the date of ventilation on the FUMIGANT marking. We are also proposing to revise the specifications for the FUMIGANT marking to allow either red or black marking on a white background. Finally, we are proposing to revise the section for clarity.

Sections 173.35, 173.120, 173.121, and Appendix H to Part 173

Section 173.35 sets forth requirements for transporting hazardous materials in intermediate bulk containers (IBCs); § 173.120 establishes classification criteria for flammable liquid (Class 3) materials; § 173.121 addresses packing group assignments for Class 3 materials; and Appendix H to Part 173 sets forth methods to test a material to determine its combustibility. We are proposing revisions in all of these sections to revise the upper limit for a PG III flammable liquid from 60.5 °C (141 °F) to 60 °C (140 °F). This is consistent with recent changes to the classification of flammable liquids based on the GHS and adoption into the UN Recommendations. PHMSA is also proposing a five-year transition period.

Section 173.115

The HMR define a Division 2.2 non-flammable gas as any material or mixture that “exerts in the packaging an absolute pressure of 280 kPa (40.6 psia) or greater at 20 °C (68 °F), \* \* \*.” In paragraph (b)(1), we propose to add the phrase “or is a cryogenic liquid,” to clarify that a cryogenic liquid, whether or not it meets the definition of a Division 2.2 non-flammable gas, is subject to the HMR. This is consistent with the current requirements for cryogenic liquids in § 173.115(g).

Currently, paragraph (k)(5) of this section requires aerosols containing Class 8, PG III materials to be assigned a Class 8 subsidiary hazard. We are proposing to amend paragraph (k)(5) to specify that aerosols containing Class 8, PG II or PG III materials must be assigned a Class 8 subsidiary hazard.

Section 173.124

Section 173.124 establishes classification criteria for Division 4.1 (flammable solid), Division 4.2 (spontaneously combustible), and Division 4.3 (dangerous when wet) materials. We are proposing to require mixtures of oxidizing substances containing 5.0% or more combustible organic substances to be subject to the self-reactive substance classification

procedure. This will ensure that oxidizing substances containing 5.0% or more of combustible organic substances are also tested for their ability to self-react and to ensure that in such instances, these substances are appropriately classed for their self-reactive hazard.

Section 173.133

Section 173.133 establishes criteria for assignment of packing groups to poisonous (Division 6.1) materials. We are proposing to amend the toxicity criteria for consistency with the toxicity criteria adopted in the UN Recommendations on the basis of the limits established in the GHS. As a result, some materials that were not previously regulated under the HMR will be regulated as Division 6.1, Packing Group III; some materials currently regulated as Division 6.1, Packing Group I or II will be assigned to a different packing group; and some materials that were previously regulated as Division 6.1, Packing Group III will not be subject to regulation under the HMR. PHMSA is proposing a five year transition period.

The effect of these changes to packing group assignments for Division 6.1 materials is summarized as follows:

Material properties	Current PG assignment	Proposed PG assignment
Oral LD <sub>50</sub> > 200, ≤ 300 (Solid) .....	Not regulated ...	III.
Oral LD <sub>50</sub> > 300, ≤ 500 (Liquid) .....	III .....	Not regulated.
Dermal LD <sub>50</sub> > 40, ≤ 50 .....	II .....	I.
Inhalation toxicity by dusts and mists LC <sub>50</sub> > 0.2, ≤ 0.5 .....	I .....	II.
Inhalation toxicity by dusts and mists LC <sub>50</sub> > 4, ≤ 10 .....	III .....	Not regulated.

Sections 173.134 and 173.197

These sections are revised by replacing the wording “Regulated medical waste” with the wording “Regulated medical waste or clinical waste or (bio) medical waste.”

Section 173.136

Currently, the HMR define “corrosive material” to mean “a liquid or solid that causes full thickness destruction of human skin at the site of contact within a specified period of time. A liquid that has a severe corrosion rate on steel or aluminum based on the criteria in § 173.137(c)(2) is also a corrosive material.” Certain solids with a low melting point may become liquid during transportation, and others may be intentionally heated above their melting point and transported as a liquid in the molten state. We believe that the Class 8 definition should apply equally to liquids and to solids offered for

transportation or transported in a liquid state. Therefore, we are proposing to revise the definition of a “corrosive material” in paragraph (a), to include a solid material that is offered for transportation or transported as a liquid and has a severe corrosion rate on steel or aluminium.

Also, we are proposing to remove the grandfather provision in § 173.136(d) on the basis that it is no longer necessary because tests other than the one specified in the UN Manual of Tests and Criteria will be authorized. See the § 173.137 preamble discussion below.

Section 173.137

Section 173.137 establishes packing group criteria for corrosive (Class 8) materials. In a final rule published under Docket HM-215G (69 FR 76155; December 20, 2004), we revised the language in paragraph (c)(2) mandating the corrosion test in the UN Manual of

Tests and Criteria as the only acceptable test method for determining the corrosivity of a material. That was not our intent. In this NPRM, we are proposing to revise paragraph (c)(2) to specify that corrosivity may be determined in accordance with methods described in the UN Manual of Tests and Criteria, as well as other equivalent methods such as those described in ASTM G 31-72.

Section 173.159

Section 173.159 establishes transportation requirements for wet electric storage batteries. In accordance with the ICAO Technical Instructions, we are proposing to revise paragraphs (a), (c)(1), (c)(2), (c)(4), (c)(5), (d)(1) and (e)(2) to clarify that batteries may be protected against short circuits by the use of non-conductive caps that cover the entire terminal(s).

## Section 173.166

Section 173.166 establishes transportation requirements for air bag inflators, air bag modules, and seat-belt pretensioners. Currently, paragraph (d)(1) excepts from the HMR air bag modules and seat-belt pretensioners approved by the Associate Administrator and installed in a motor vehicle or a completed motor vehicle component. We propose to revise paragraph (d)(1) to expand the exception to include air bag modules and seat-belt pretensioners installed in other means of conveyance, such as boats and aircraft, or their components.

## Section 173.187

Section 173.187 establishes transportation requirements for pyrophoric solids, metals, or alloys, not otherwise specified (n.o.s.). We propose to revise this section for clarity and to correct an oversight by adding 4A steel boxes to the list of authorized packagings for pyrophoric solids, metals or alloys, n.o.s.

## Section 173.216

Section 173.216 establishes transportation requirements for blue, brown, or white asbestos. Paragraph (c) of this section specifies packaging requirements for these materials. In paragraph (c), we are proposing to require bags or other non-rigid packages containing asbestos to be transported in rigid outer packages or closed freight containers.

## Section 173.220

Section 173.220 establishes transportation requirements for internal combustion engines, self-propelled vehicles, mechanical equipment containing internal combustion engines, and battery powered vehicles and equipment. For transportation by aircraft, the HMR impose a pressure limit of not more than 5% of the maximum allowable working pressure in any part of the system between the pressure receptacle and the shut off valve of a flammable gas powered vehicle. We are proposing to revise paragraph (b)(2)(ii)(B)(3) to specify that the pressure limit imposed applies to the entire closed system and that the maximum pressure allowed is 290 psig (2000 kPa). Also, consistently with the ICAO Technical Instructions, we are proposing to revise paragraphs (c) and (d) to clarify that batteries may be protected against short circuits by the use of non-conductive caps that cover the entire terminal(s).

## Section 173.222

This section establishes requirements for hazardous materials in equipment, machinery and apparatus. Because of the addition of Special provision A105 in the HMT, the shipping paper requirements in paragraph (d) no longer apply to transportation by aircraft. We are proposing to revise paragraph (d) accordingly.

## Section 173.224

Section 173.224 establishes packaging and control and emergency temperatures for self-reactive materials. The Self-Reactive Materials Table in paragraph (b)(7) of this section specifies self-reactive materials authorized for transportation without first being approved for transportation by the Associate Administrator for Hazardous Materials Safety and requirements for transporting these materials. In paragraph (b)(7), we propose to add a new entry "Acetone-pyrogallol copolymer 2-diazo-1-naphthol-5-sulphonate" to the Self-Reactive Materials Table.

## Section 173.230

We are proposing to add a new packaging section (§ 173.230) for the transportation of "Fuel cell cartridges containing flammable liquids, UN 3473" including methanol or methanol/water solutions. For consistency with the ICAO Technical Instructions, we are proposing to require fuel cell cartridges containing flammable liquids, other than those packaged with equipment, to be packaged in specification packagings for all modes of transportation. Fuel cell cartridges packaged in or with equipment must be packaged in strong outer packagings.

## Section 173.306

This section establishes transportation requirements for limited quantities of compressed gases. Paragraph (i) of this section excepts aerosols with capacities under 50 mL (1.7 oz) and pressures not exceeding 970 kPa (141 psig) at 55 °C (131 °F) from all HMR requirements. In this NPRM, we propose to expand this exception to aerosols with capacities of less than 50 mL (1.7 oz) and pressures of up to 290 psig (2000 kPa) provided the packagings conform to the general packaging requirements of § 173.24. The proposed amendment is not consistent with provisions of the UN Recommendations or the ICAO Technical Instructions, which do not limit the pressure within the aerosol or small receptacle. We are not convinced that aerosols should be excepted from all regulation when the pressure in the container exceeds 290 psig (2000 kPa).

Because the aerosols and small gas receptacles would not be subject to the shipping paper, package marking, or labeling requirements, a carrier might be unaware of the potential risks. In addition, to avoid confusion and further clarify the intent of this exception, we are proposing to revise paragraph (i) to specify that the 50 mL exception for aerosols does not apply to self-defense sprays. It was not our intent to authorize the use of this exception for self-defense sprays.

Also, we are proposing to add a new paragraph (j) to alert readers to additional exceptions for compressed gases in § 173.307.

## Part 175

## Section 175.10

Currently, safety matches or a lighter intended for use by a passenger or crew member are excepted from the HMR. In accordance with the ICAO Technical Instructions, in this NPRM, we are proposing to revise paragraph (a)(2) to limit the number of safety matches that may be carried on one's person or in carry-on baggage by a passenger or crewmember to one packet.

## Section 175.78

Section 175.78 establishes requirements for stowing hazardous materials on an airplane. We propose to amend paragraph (c)(4) to clarify which explosive materials may be stowed together aboard an aircraft and to remove existing stowage references for explosive materials not authorized for transportation aboard aircraft under any circumstances.

## Part 176

## Section 176.76

Section 176.76 establishes requirements for vessel transportation of transport vehicles, freight containers, and portable tanks containing hazardous materials. Paragraph (f) includes requirements for portable tanks containing flammable liquids or gases. Consistently with recent changes to the classification of flammable liquids based on the GHS and adopted into the UN Recommendations discussed elsewhere in this preamble, we are proposing to revise paragraph (f)(2) to specify the new upper limit for a PG III flammable liquid to be 60 °C (140 °F).

## Section 176.83

Section 176.83 establishes segregation requirements for hazardous materials transported by vessel. We are proposing to revise paragraph (a)(4) to identify materials of different hazard classes that do not react dangerously with each

other and, therefore, do not need to be segregated.

#### Section 176.84

Section 176.84 contains additional stowage and segregation requirements for hazardous materials on cargo and passenger vessels. Consistently with the 2004 Edition of the IMDG Code, incorporating Amendment 33–06, in the paragraph (b) Table of provisions, we are proposing to add a new Code “144.”

Code “144” would be added to the entries “Plastic molding compound *in dough, sheet or extruded rope from evolving flammable vapor,*” UN3314, and “Polymeric beads expandable, *evolving flammable vapor,*” UN2211, to specify these materials must be mechanically ventilated in accordance with SOLAS regulation II–2/19 (IBR; see § 171.7 of this subchapter) for flammable liquids with a flashpoint below 23 °C (73 °F) when stowed under deck.

Also, we are proposing to add a new note “2” following the Table. Note “2” provides an exception from the segregation requirements for Class 8, PG II and III materials, provided the substances do not react dangerously with each other and the quantities per package do not exceed 30 L (7.8 gallons) for liquids and 30 kg (66 lbs.) for solids. We are also proposing to revise Codes “26,” “27,” “52,” and “53” to add the new proposed note “2.” These provisions are consistent with the IMDG Code.

#### Part 178

##### Section 178.274

Section 178.274 establishes design, manufacturing, and test requirements for UN portable tanks. Currently, a prototype UN portable tank must be shown capable of absorbing the forces resulting from an impact not less than four times the maximum permissible gross weight of the fully loaded portable tank at a duration that is typical of the mechanical shocks experienced in rail transportation. Several standards describing methods acceptable for performing the impact test were previously listed in the UN Recommendations (6.7.3.15). The Fourteenth revised edition of the UN Recommendations includes a dynamic longitudinal impact test for portable tanks. All procedures, test requirements, processing and analysis of data are found in Section 41 of Addendum 2 to the UN Recommendations.

We propose to revise paragraph (j)(6) to require each UN portable tank design type be subjected to a dynamic longitudinal impact test to prove the

ability of the portable tank to withstand the effects of a longitudinal impact. This requirement would take effect on January 1, 2008, and is consistent with the international requirements. UN portable tanks impact-tested based on the criteria in effect on October 1, 2005, would not need to be retested.

##### Section 178.602

Section 178.602 establishes requirements for the preparation of packagings for testing to ascertain that the packaging conforms to the design requirements of the applicable specification. Currently, for the preparation of bags for the drop and stacking tests, paragraph (b) requires bags to be filled to the maximum mass at which they may be used. We are proposing to revise paragraph (b) to clarify that the preparation of bags for the drop and stacking tests only applies to bags containing solids.

##### Section 178.810

Section 178.810 establishes requirements for performing the drop test for IBCs. We are proposing to revise paragraph (b)(1) to clarify that metal, rigid plastic, and composite IBCs must be filled to not less than 95% of their maximum capacity when conducting drop tests for solids, and not less than 98% of their maximum capacity for liquids. Similarly, in paragraph (b)(2), we are proposing to require fiberboard and wooden IBCs to be filled with a solid material to not less than 95% of their maximum capacity. Also, we are proposing to add a new paragraph (b)(3) to require filling flexible IBCs to the maximum permissible gross mass and even distribution of the contents.

#### Part 180

##### Section 180.352

Section 180.352 establishes requirements for retesting and inspection of IBCs to ensure that they continue to conform to the applicable specification. We are proposing to revise paragraph (b) to specify that each IBC intended to contain solids that are loaded or discharged under pressure or intended to contain liquids must be tested in accordance with the leakproofness test prescribed in § 178.813 prior to its first use in transportation. For this test, the IBC is not required to have its closures fitted. These additions incorporate clarifications adopted in the Fourteenth revised edition of the UN Recommendations. We are proposing to editorially revise paragraph (g) for clarity.

## VI. Regulatory Analyses and Notices

### A. Statutory/Legal Authority for This Rulemaking

This proposed rule is published under the following statutory authorities:

1. 49 U.S.C. 5103(b) authorizes the Secretary of Transportation to prescribe regulations for the safe transportation, including security, of hazardous material in intrastate, interstate, and foreign commerce. This proposed rule amends regulations 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. To this end, as discussed in detail earlier in this preamble, the proposed rule amends the HMR to more fully align them with the biennial updates of the UN Recommendations, the IMDG Code and the ICAO Technical Instructions; this will facilitate the transport of hazardous materials in international commerce.

2. 49 U.S.C. 5120(b) authorizes the Secretary of Transportation to ensure that, to the extent practicable, regulations governing the transportation of hazardous materials in commerce are consistent with standards adopted by international authorities. This rule proposes to amend the HMR to maintain alignment with international standards by incorporating various amendments to facilitate the transport of hazardous material in international commerce. To this end, as discussed in detail earlier in this preamble, the rule proposes to incorporate changes into the HMR based on the Fourteenth revised edition of the UN Recommendations, Amendment 33 to the IMDG Code, and the 2007–2008 ICAO Technical Instructions, which become effective January 1, 2007. The continually increasing amount 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; at the same time, harmonization ensures the safety of people, property, and the environment by reducing the potential for confusion and misunderstanding that could result if shippers and transporters were required to comply with two or more conflicting sets of regulatory requirements. While the intent of this rulemaking is to align the HMR with international standards, we review and consider each amendment on its own merit based on its 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. Thus, as discussed in detail earlier in this preamble, there are several instances where we elected not to adopt a specific provision of the UN Recommendations, the IMDG Code or the ICAO Technical Instructions; further, we are maintaining a number of current exceptions for domestic transportation that should minimize the compliance burden on the regulated community.

#### *B. Executive Order 12866 and DOT Regulatory Policies and Procedures*

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

The majority of amendments in this proposed 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.

We propose 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. The total net increase in costs to businesses in implementing the proposed rule is considered to be minimal. The costs are the result of reprogramming shipping paper computer programs, replacement of pre-printed forms for firms that do not use automated systems, and changes to package markings and labels. Initial start-up and inventory costs would result from these changes; however, the costs would be offset by greater long-term savings of conformance with one

set of regulations and a one year transition period. A regulatory evaluation is available for review in the public docket for this rulemaking.

#### *C. Executive Order 13132*

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 13132 ("Federalism"). This proposed rule 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. 5101–5128, 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 material;

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

(3) The preparation, execution, and use of shipping documents related to hazardous material 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 material; and

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

This proposed rule addresses covered subject items (1), (2), (3), and (5) above and preempts State, local, and Indian tribe requirements not meeting the "substantively the same" standard. This proposed rule is necessary to incorporate changes adopted in international standards, effective January 1, 2007. If the changes in this proposed rule are 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 a dual system of regulations. The changes in this proposed 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 the final rule and not later than two years after the date of issuance. PHMSA proposes the effective date of Federal preemption be 90 days from publication of a final rule in this matter in the **Federal Register**.

#### *D. Executive Order 13175*

This proposed rule was analyzed in accordance with the principles and criteria contained in Executive Order 13175 ("Consultation and Coordination with Indian Tribal Governments"). Because this proposed 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.

#### *E. Regulatory Flexibility Act, Executive Order 13272, and DOT Procedures and Policies*

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 proposed rule facilitates the transportation of hazardous materials in international commerce by providing consistency with international standards. This proposed rule applies to offerors and carriers of hazardous materials, some of whom are small entities, such as chemical users and suppliers, packaging manufacturers, distributors, battery manufacturers, and training companies. As discussed above, under *Executive Order 12866*, the majority of amendments in this proposed 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 these amendments. Additionally, the changes effected by this final rule will relieve U.S. companies, including small entities competing in foreign markets, from the burden of complying with a dual system of regulations. Therefore, I certify that these amendments will not, if promulgated, have a significant economic impact on a substantial number of small entities.

This proposed 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.

#### F. Paperwork Reduction Act

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid Office of Management and Budget (OMB) control number. Section 1320.8(d), Title 5, Code of Federal Regulations requires that PHMSA provide interested members of the public and affected agencies an opportunity to comment on information collection and recordkeeping requests. PHMSA currently has two approved information collections affecting this proposed rule: OMB Control Number 2137–0557, “Approvals for Hazardous Materials” with 25,605 burden hours and \$562,837.40 burden costs; and OMB Control Number 2137–0613, “Subsidiary Hazard Class & Number/Type of Packagings” with 63,309 burden hours and \$216,705 burden costs.

This rule proposes minor editorial changes. However, there is no net increase in burden for OMB Control Number 2137–0557 or OMB Control Number 2137–0613. We estimate the total information collection and recordkeeping burden 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: 25,605.  
Total Annual Burden Cost: \$562,837.40.

#### “Subsidiary Hazard Class & Number/Type of Packagings”

OMB Number: 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 Burden Hours: 45,705.  
Total First Year Burden Cost: \$1,115,992.

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

#### G. 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.

#### H. Unfunded Mandates Reform Act

This proposed rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$120.7 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.

#### I. 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. Consistency in the regulations for the transportation of hazardous materials aids in shipper understanding of the requirements and permits shippers to more easily comply with safety regulations and avoid the potential for environmental damage or contamination. Our findings tentatively conclude that there are no significant environmental impacts associated with this proposed rule. Interested parties, however, are invited to review the Environmental Assessment available in the docket and to comment on what environmental impact, if any, the proposed regulatory changes would have.

#### J. Privacy Act

Anyone is able to search the electronic form of any written communications and comments received into any of our dockets by the name of the individual submitting the document (or signing the document, if submitted on behalf of an association, business, labor union, etc.). You may review DOT’s complete Privacy Act Statement in the **Federal Register** published on April 11, 2000 (Volume 65, Number 70; Pages 19477–78) or you may visit <http://dms.dot.gov>.

#### 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, Incorporation by reference, Labeling, Markings, Packaging and containers, Reporting and recordkeeping requirements.

##### 49 CFR Part 173

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

##### 49 CFR Part 175

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

##### 49 CFR Part 176

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

##### 49 CFR Part 178

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

##### 49 CFR Part 180

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

In consideration of the foregoing, 49 CFR Chapter I is proposed to be 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. 5101–5128, 44701; 49 CFR 1.45 and 1.53; Pub. L. 101–410 section 4 (28 U.S.C. 2461 note); Pub. L. 104–134 section 31001.

2. In § 171.7, in the paragraph (a)(3) table, the following changes are made:

a. Under the entry “International Civil Aviation Organization (ICAO),” the

entry "Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), 2005–2006 Edition" is revised;

b. Under the entry "International Maritime Organization (IMO)," the entries "International Convention for the Safety of Life at Sea, (SOLAS) Amendments 2000, Chapter II–2/Regulation 19, 2001" and "International

Maritime Dangerous Goods Code (IMDG Code), 2004 Edition, Incorporating Amendment 32–04 (English Edition), Volumes 1 and 2" are revised;

c. Under the entry "United Nations," the entry "UN Recommendations on the Transport of Dangerous Goods, Thirteenth Revised Edition (2003), Volumes I and II" is revised;

d. Under the entry "United Nations," the entry "UN Recommendations on the

Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth Revised Edition, (2003)" is revised.

The revisions read as follows:

**§ 171.7 Reference material.**

(a) \* \* \*

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

Source and name of material	49 CFR reference
* * * * *	* * * * *
International Civil Aviation Organization (ICAO).	
* * * * *	* * * * *
Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), 2007–2008 Edition.	171.8; 171.11; 172.202; 172.401; 172.512; 172.602; 173.320; 175.33; 178.3.
International Maritime Organization (IMO).	
* * * * *	* * * * *
International Convention for the Safety of Life at Sea, (SOLAS) Amendments 2000, Chapter II–2/Regulation 19, 2001.	176.63; 176.84.
International Maritime Dangerous Goods Code (IMDG 2006 Edition, Incorporating Amendment 33–06 (English Edition), Volumes 1 and 2.	171.12; 172.202; 172.401; 172.502; 172.602; 173.21; 176.2; 176.5; 176.11; 176.27; 176.30; 178.3.
* * * * *	* * * * *
United Nations.	
* * * * *	* * * * *
UN Recommendations on the Transport of Dangerous Goods, Fourteenth revised edition (2005). Volumes I and II.	171.12; 172.202; 172.41; 172.502; 173.22; 173.24; 173.24b; 173.197; Part 173, appendix H; 178.274; 178.001.
UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria, Fourth revised edition, (2003), and Addendum 2, (2004).	172.102; 173.21; 173.56; 173.57; 173.58; 173.115; 173.124; 173.125; 173.127; 173.128; 173.185; 178.274.
* * * * *	* * * * *

\* \* \* \* \*

3. In § 171.14, paragraph (b) is removed and reserved; paragraphs (d) introductory text, (d)(1) and (d)(2) are revised; paragraphs (d)(7) and (d)(8) are removed; paragraphs (e) and (f) are revised; and new paragraph (g) is added to read as follows:

**§ 171.14 Transitional provisions for implementing certain requirements.**

\* \* \* \* \*

(b) [Reserved]

\* \* \* \* \*

(d) A final rule published in the **Federal Register** on [PUBLICATION DATE OF FINAL RULE], effective January 1, 2007, resulted in revisions to this subchapter. During the transition period, until January 1, 2008, 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 December 31, 2006, or the requirements published in the [PUBLICATION DATE OF FINAL RULE] final rule.

(1) *Transition dates.* The effective date of the final rule published on

[PUBLICATION DATE OF FINAL RULE] is January 1, 2007. A delayed compliance date of January 1, 2008, is authorized. Unless otherwise specified, on and after January 1, 2008, all applicable regulatory requirements adopted in the final rule in effect on January 1, 2007, 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 December 31, 2006, or the new requirements of this subchapter in the 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:

(i) If either shipping names or identification numbers are identical, a shipping paper may display the old shipping description even if the package is marked and labeled under the new shipping description;

(ii) If either shipping names or identification numbers are identical, a

shipping paper may display the new shipping description; and

(iii) Either old or new placards may be used regardless of whether old or new shipping descriptions, labels, and package markings are used.

\* \* \* \* \*

(e) The shipping description sequences in effect on December 31, 2006, may be used until January 1, 2012.

(f) A Division 5.2 label and a Division 5.2 placard conforming to the specifications in §§ 172.427 and 172.552, respectively, of this subchapter in effect on December 31, 2006, may be used until January 1, 2011.

(g) The Class 3 and Division 6.1 classification criteria and packing group assignments in effect on December 31, 2006, may be used until January 1, 2012.

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

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

Authority: 49 U.S.C. 5101–5128; 44701; 49 CFR 1.53.

5. In § 172.101, paragraph (d)(4) is revised and the Hazardous Materials Table is amended by removing, adding and revising, in the appropriate alphabetical sequence, to read as follows:

**§ 172.101 Purpose and use of hazardous materials table.**

\* \* \* \* \*

(d) \* \* \*

(4) Each reference to a Class 3 material is modified to read “Combustible liquid” when that material is reclassified in accordance

with § 173.150(e) or (f) of this subchapter or has a flash point above 60 °C (140 °F) but below 93 °C (200 °F).

\* \* \* \* \*

§ 172.101—HAZARDOUS MATERIALS TABLE

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)		(9) Quantity limitations		(10) Vessel stowage		
							(8A) Exceptions	(8B) Non-bulk	(8C) Bulk	(9A) Passenger aircraft/rail	(9B) Cargo aircraft only	(10A) Location	(10B) Other
	[Remove].												
*	Carbon dioxide and nitrous oxide mixtures.	2.2	UN1015	*	2.2	*	306	*	None	314, 315	75 kg	150 kg	A
*	Carbon dioxide and oxygen mixtures, compressed.	2.2	UN1014	*	2.2, 5.1	77, A14	306	*	304	314, 315	75 kg	150 kg	A
*	Carbon monoxide and hydrogen mixture, compressed.	2.3	UN2600	*	2.3, 2.1	6	None	*	302	302	Forbidden	Forbidden	D
*	Crotonaldehyde, stabilized.	6.1	UN1143	I	6.1, 3	2, B9, B14, B32, B74, B77, T20, TP2, TP13, TP38, TP45.	None	*	227	244	Forbidden	Forbidden	B
8	Crotonic acid, liquid	III	UN2823	III	8	IB8, T1	154	*	203	241	5 L	60 L	A
8	Crotonic acid, solid	III	UN2823	III	8	IB8, IP3, T1, TP33.	154	*	213	240	25 kg	100 kg	A
*	Formic acid	8	UN1779	II	8	B2, B28, IB2, T7, TP2.	154	*	202	242	1 L	30 L	A
*	Hydrogen difluoride, n.o.s.	8	UN1740	II	8	IB8, IP2, IP4, N3, N34, T3, TP33.	None	*	212	240	15 kg	50 kg	A
*	Hydroquinone, solid.	6.1	UN2662	III	6.1	IB8, IP3, N3, N34, T1, TP33.	154	*	213	240	25 kg	100 kg	A
*	Hydroquinone solution.	6.1	UN3435	III	6.1	IB3, T4, TP1	153	*	203	241	60 L	220 L	A
*	Propionic acid	8	UN1848	III	8	IB3, T4, TP1	154	*	203	241	5 L	60 L	A
*	Rare gases and nitrogen mixtures, compressed.	2.2	UN1981	*	2.2	*	306	*	302	None	75 kg	150 kg	A

§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)		(9) Quantity limitations		(10) Vessel stowage	
							(8A) Exceptions	(8B) Non-bulk	(8C) Bulk	(9A) Passenger aircraft/rail	(9B) Cargo aircraft only	(10A) Location
	Rare gases and oxygen mixtures, compressed.	* 2.2	UN1980	*	2.2	79	306	302	75 kg	150 kg	A	
	Rare gases mixtures, compressed.	* 2.2	UN1979	*	2.2		306	302	75 kg	150 kg	A	
	Regulated medical waste.	* 6.2	UN3291	II	6.2	A13	134	197	No limit	No limit	A	40.
	[ADD]:	*		*		*			*	*		
	Crotonaldehyde or Crotonaldehyde, stabilized.	* 6.1	UN1143	I	6.1, 3	2, 175, B9, B14, B32, B74, B77, T20, TP2, TP13, TP38, TP45.	None	227	Forbidden	Forbidden	B	40.
	Crotonic acid, liquid	8	UN3472	III	8	IB8, T1	154	203	5 L	60 L	A	12.
	Crotonic acid, solid	8	UN2823	III	8	IB8, IP3, T1, TP33.	154	213	25 kg	100 kg	A	12.
	Formic acid with not less than 10% but not more than 85% acid by mass.	* 8	UN3412	II	8	IB2, T7, TP2	154	202	1 L	30 L	A	40.
	Formic acid with not less than 5% but less than 10% acid by mass.	8	UN3412	III	8	IB3, T4, TP1	154	203	5 L	60 L	A	40.
	Formic acid with more than 85% acid by mass.	8	UN1779	II	8, 3	B2, B28, IB2, T7, TP2.	154	202	1 L	30 L	A	40.
	Fuel cell cartridges containing flammable liquids.	* 3	UN3473	II	3		150	230	5 L	60 L	A	
	Hydrogen difluoride, solid, n.o.s.	* 8	UN1740	II	8	IB8, IP2, IP4, N3, N34, T3, TP33.	None	212	15 kg	50 kg	A	25, 40, 52.
	Hydrogen difluoride solution, n.o.s.	8	UN3471	II	8, 6.1	IB8, IP3, N3, N34, T1, TP33.	154	213	25 kg	100 kg	A	25, 40, 52.
		8	UN3471	II	8, 6.1	IB2, T7, TP2	154	202	1 L	30 L	A	25, 40, 52.
		III			8, 6.1	IB3, T4, TP1	154	203	5 L	60 L	A	25, 40, 52.

<p>Paint, corrosive, flammable (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base).</p>	<p>* 8 UN3470 .... II .....</p>	<p>* .....</p>	<p>* 8, 3 .....</p>	<p>* .....</p>	<p>* IB2, T7, TP2, TP8, TP28.</p>	<p>* 154 .....</p>	<p>* 202 .....</p>	<p>* 243 .....</p>	<p>* 1 L .....</p>	<p>* 30 L .....</p>	<p>* B .....</p>	<p>40.</p>
<p>Paint related material corrosive, flammable (including paint thinning or reducing compound).</p>	<p>8 UN3470 .... II .....</p>	<p>8, 3 .....</p>	<p>IB2, T7, TP2, TP8, TP28.</p>	<p>154 .....</p>	<p>202 .....</p>	<p>243 .....</p>	<p>1 L .....</p>	<p>30 L .....</p>	<p>B .....</p>	<p>40.</p>		
<p>Paint, flammable, corrosive (including paint, lacquer, enamel, stain, shellac, varnish, polish, liquid filler and liquid lacquer base).</p>	<p>* 3 UN3469 .... I .....</p>	<p>* .....</p>	<p>* 3, 8 .....</p>	<p>* .....</p>	<p>* T11, TP2, TP27</p>	<p>* None .....</p>	<p>* 201 .....</p>	<p>* 243 .....</p>	<p>* 0.5 L .....</p>	<p>* 2.5 L .....</p>	<p>* E .....</p>	<p>40.</p>
<p>Paint related material, flammable, corrosive (including paint thinning or reducing compound).</p>	<p>II .....</p>	<p>3, 8 .....</p>	<p>IB2, T7, TP2, TP8, TP28.</p>	<p>150 .....</p>	<p>202 .....</p>	<p>243 .....</p>	<p>1 L .....</p>	<p>5 L .....</p>	<p>B .....</p>	<p>40.</p>		
	<p>III .....</p>	<p>3, 8 .....</p>	<p>IB3, T4, TP1, TP29.</p>	<p>150 .....</p>	<p>203 .....</p>	<p>242 .....</p>	<p>5 L .....</p>	<p>60 L .....</p>	<p>A .....</p>	<p>40.</p>		
	<p>I .....</p>	<p>3, 8 .....</p>	<p>T11, TP2, TP27</p>	<p>None .....</p>	<p>201 .....</p>	<p>243 .....</p>	<p>0.5 L .....</p>	<p>2.5 L .....</p>	<p>E .....</p>	<p>40.</p>		
<p>Propionic acid with not less than 90% acid by mass.</p>	<p>* 8 UN3463 .... II .....</p>	<p>* .....</p>	<p>* 8, 3 .....</p>	<p>* .....</p>	<p>* IB2, T7, TP2</p>	<p>* 154 .....</p>	<p>* 202 .....</p>	<p>* 243 .....</p>	<p>* 1 L .....</p>	<p>* 30 L .....</p>	<p>* A.</p>	
<p>Propionic acid with not less than 10% and less than 90% acid by mass.</p>	<p>8 UN1848 .... III .....</p>	<p>8 .....</p>	<p>IB3, T4, TP1</p>	<p>154 .....</p>	<p>203 .....</p>	<p>241 .....</p>	<p>5 L .....</p>	<p>60 L .....</p>	<p>A .....</p>	<p>40.</p>		
<p>Regulated medical waste, n.o.s. or clinical waste, unspecified, n.o.s. or (BIO) Medical waste, n.o.s.</p>	<p>* 6.2 UN3291 .... II .....</p>	<p>* .....</p>	<p>* 6.2 .....</p>	<p>* .....</p>	<p>* A13 .....</p>	<p>* 134 .....</p>	<p>* 197 .....</p>	<p>* 197 .....</p>	<p>* No limit .....</p>	<p>* No limit .....</p>	<p>* B .....</p>	<p>40.</p>

§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)		(9) Quantity limitations		(10) Vessel stowage									
							(8A) Exceptions	(8B) Non-bulk	(8C) Bulk	(9A) Passenger aircraft/air-trail	(9B) Cargo aircraft only	(10A) Location	(10B) Other							
	[Revise]:	*	*	*	*	*	*	*	*	*	*	*								
	Aerosols, non-flammable, (each not exceeding 1 L capacity).	2.2	UN1950	.....	2.2	.....	306	.....	None	.....	75 kg	.....	150 kg	.....	A	.....	48, 87, 126.			
G	Amines, flammable, corrosive, n.o.s. or Polyamines, flammable, corrosive, n.o.s.	*	3 UN2733	.....	3, 8	.....	T14, TP1, TP27	None	.....	201	.....	243	.....	0.5 L	.....	2.5 L	.....	D	.....	40, 52.
		II	.....	3, 8	.....	IB2, T11, TP1, TP27.	150	.....	202	.....	243	.....	1 L	.....	5 L	.....	B	.....	40, 52	
		III	.....	3, 8	.....	B1, IB3, T7, TP1, TP28.	150	.....	203	.....	242	.....	5 L	.....	60 L	.....	A	.....	40, 52	
	Aminopyridines (o-, m-, p-).	*	6.1 UN2671	.....	6.1	.....	IB8, IP2, IP4, T3, TP33.	None	.....	212	.....	242	.....	25 kg	.....	100 kg	.....	B	.....	12, 40, 52.
I	Ammonia, anhydrous.	2.3	UN1005	.....	2.3, 8	.....	4, T50	None	.....	304	.....	314, 315	.....	Forbidden	.....	Forbidden	.....	D	.....	40, 52, 57.
D	Ammonia, anhydrous.	2.2	UN1005	.....	2.2	.....	13, T50	None	.....	304	.....	314, 315	.....	Forbidden	.....	Forbidden	.....	D	.....	40, 52, 57.
D	Ammonia solution, relative density less than 0.880 at 15 degrees C in water, with more than 50 percent ammonia.	2.2	UN3318	.....	2.2	.....	13, T50	None	.....	304	.....	314, 315	.....	Forbidden	.....	Forbidden	.....	D	.....	40, 52, 57.
I	Ammonia solution, relative density less than 0.880 at 15 degrees C in water, with more than 50 percent ammonia.	2.3	UN3318	.....	2.3, 8	.....	4, T50	None	.....	304	.....	314, 315	.....	Forbidden	.....	Forbidden	.....	D	.....	40, 52, 57.
	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	.....	8	.....	IB3, IP8, T7, TP1	154	.....	203	.....	241	.....	5 L	.....	60 L	.....	A	.....	40, 52, 85.



§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)			(9) Quantity limitations		(10) Vessel stowage		
							(8A) Exceptions	(8B) Non-bulk	(8C) Bulk	(9A) Passenger aircraft/rail	(9B) Cargo aircraft only	(10A) Location	(10B) Other	
*	Batteries, dry, containing potassium hydroxide solid, <i>electric, storage.</i>	8	UN3028	III	8	*	None	213	None	*	25 kg gross	230 kg gross	A	52.
*	Batteries, wet, filled with alkali, <i>electric storage.</i>	8	UN2795	III	8	*	159	159	*	30 kg gross	No limit	A	52.	
*	Battery fluid, alkali	8	UN2797	II	8	*	154	202	*	1 L	30 L	A	29, 52.	
*	Benzyl bromide	6.1	UN1737	II	6.1, 8	*	None	202	*	243	1 L	30 L	D	13, 40.
*	Benzyl chloride	6.1	UN1738	II	6.1, 8	*	None	202	*	243	1 L	30 L	D	13, 40.
*	Caesium hydroxide	8	UN2682	II	8	*	154	212	*	240	15 kg	50 kg	A	29, 52.
*	Caesium hydroxide solution.	8	UN2681	II	8	*	154	202	*	242	1 L	30 L	A	29, 52.
*	Caustic alkali liquids, n.o.s.	8	UN1719	II	8	*	154	202	*	242	1 L	30 L	A	29, 52.
1.1D	Charges, shaped, flexible, linear.	1.1D	UN0288	II	1.1D	*	None	62	*	None	Forbidden	Forbidden	07..	
*	Chlorosilanes, corrosive, n.o.s.	8	UN2987	II	8	*	None	202	*	242	1 L	30 L	C	40.
3	Chlorosilanes, flammable, corrosive, n.o.s.	3	UN2985	II	3, 8	*	None	201	*	243	1 L	5 L	B	40.
6.1	Chlorosilanes, toxic, corrosive, n.o.s.	6.1	UN3361	II	6.1, 8	*	None	202	*	243	1 L	30 L	C	40.
6.1	Chlorosilanes, toxic, corrosive, flammable, n.o.s.	6.1	UN3362	II	6.1, 3, 8	*	None	202	*	243	1 L	30 L	C	40, 125.



§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)		(9) Quantity limitations		(10) Vessel stowage		
							(8A) Exceptions	(8B) Non-bulk	(8C) Bulk	(9A) Passenger aircraft/rail	(9B) Cargo aircraft only	(10A) Location	(10B) Other
	Dimethylhydrazine, unsymmetrical.	6.1	UN1163	I	6.1, 3, 8	2, B7, B9, B14, B32, B74, T20, TP2, TP13, TP38, TP45.	None	227	244	Forbidden	Forbidden	D	21, 38, 40, 52, 100.
*	Disodium trioxosilicate.	8	UN3253	III	8	IB8, IP3, T1, TP33.	154	213	240	25 kg	100 kg	A	52.
*	Ethanolamine or Ethanolamine-solutions.	8	UN2491	III	8	IB3, T4, TP1	154	203	241	5 L	60 L	A	52.
*	Ethylamine, aqueous solution with not less than 50 percent but not more than 70 percent ethylamine.	3	UN2270	II	3, 8	IB2, T7, TP1	150	202	243	1 L	5 L	B	40, 52.
*	Ethylenediamine	8	UN1604	II	8, 3	IB2, T7, TP2	154	202	243	1 L	30 L	A	40, 52.
*	1-Ethylpiperidine	3	UN2386	II	3, 8	IB2, T7, TP1	150	202	243	1 L	5 L	B	52.
*	Ethyltrichlorosilane	3	UN1196	II	3, 8	A7, IB1, N34, T7, TP2, TP13.	None	202	243	1 L	5 L	B	40.
*	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, 52, 125.
*	Hydrazine, aqueous solution, with not more than 37 percent hydrazine, by mass.	6.1	UN3293	III	6.1	IB3, T4, TP1	153	203	241	60 L	200 L	A	52.
*	Hydrazine, aqueous solutions, with more than 37% hydrazine, by mass.	8	UN2030	I	8, 6.1	B16, B53, T10, TP2, TP13.	None	201	243	Forbidden	2.5 L	D	40, 52.
II					8, 6.1	B16, B53, IB2, T7, TP2, TP13.	None	202	243	Forbidden	30 L	D	40, 52
III					8, 6.1	B16, B53, IB3, T4, TP1.	None	203	241	5 L	60 L	D	40, 52



§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.**)		(9) Quantity limitations			(10) Vessel stowage	
							Exceptions (8A)	Non-bulk (8B)	Bulk (8C)	Passenger aircraft/rail (9A)	Cargo aircraft only (9B)	Location (10A)	Other (10B)
	Lithium hydroxide ..	* 8	UN2680	II	8	IB8, IP2, IP4, T3, TP33.	*	212	240	15 kg	50 kg	A	52.
	Lithium hydroxide, solution.	8	UN2679	II	8	B2, IB2, T7, TP2	154	202	242	1 L	30 L	A	29, 52.
		III			8	IB3, T4, TP2	154	203	241	5 L	60 L	A	29, 52, 96.
	Methylamine, aqueous solution.	* 3	UN1235	II	3, 8	B1, IB2, T7, TP1	*	202	243	1 L	5 L	E	52, 135.
	Methylhydrazine ....	* 6.1	UN1244	I	6.1, 3, 8	1, B7, B9, B14, B30, B72, B77, N34, T22, TP2, TP13, TP38, TP44.	*	226	244	Forbidden	Forbidden	D	21, 40, 49, 52, 100.
	Methylphenyldichlorosilane.	* 8	UN2437	II	8	IB2, T7, TP2, TP13.	*	202	242	1 L	30 L	C	40.
	1-Methylpiperidine	3	UN2399	II	3, 8	IB2, T7, TP1	150	202	243	1 L	5 L	B	52.
	Motor fuel anti-knock mixtures.	* 6.1	UN1649	I	6.1	14, 151, B9, B90, T14, TP2, TP13.	*	201	244	Forbidden	30 L	D	25, 40.
G	Organometallic substance, solid, pyrophoric.	* 4.2	UN3391	I	4.2	T21, TP7, TP33	*	187	244	Forbidden	Forbidden	D.	
	Paint including paint, lacquer, enamel, stain, shellac solutions, varnish, polish, liquid filler and liquid lacquer base.	* 3	UN1263	I	3	T11, TP1, TP8, TP27.	*	201	243	1 L	30 L	E.	
		II			3	149, B52, IB2, T4, TP1, TP8, TP28.	150	173	242	5 L	60 L	B.	
		III			3	B1, B52, IB3, T2, TP1, TP29.	150	173	242	60 L	220 L	A.	
	Paint or Paint related materials.	8	UN3066	II	8	B2, IB2, T7, TP2, TP28.	154	173	242	1 L	30 L	A.	
		III			8	B52, IB3, T4, TP1, TP29.	154	173	241	5 L	60 L	A.	



§ 172.101—HAZARDOUS MATERIALS TABLE—Continued

(1) Symbols	(2) Hazardous materials descriptions and proper shipping names	(3) Hazard class or division	(4) Identification numbers	(5) PG	(6) Label codes	(7) Special provisions (§ 172.102)	(8) Packaging (§ 173.***)			(9) Quantity limitations			(10) Vessel stowage	
							Exceptions (8A)	Non-bulk (8B)	Bulk (8C)	Passenger aircraft/rail (9A)	Cargo aircraft only (9B)	Location (10A)	Other (10B)	
	Sodium hydroxide, solid.	* 8	UN1823	II	8	IB8, IP2, IP4, T3, TP33.	*	212	240	15 kg	50 kg	A	52.	
	Sodium hydroxide solution.	8	UN1824	II	8	B2, IB2, N34, T7, TP2.		202	242	1 L	30 L	A	52.	
		III			8	IB3, N34, T4, TP1.		203	241	5 L	60 L	A	52.	
	Sodium monoxide	* 8	UN1825	II	8	IB8, IP2, IP4, T3, TP33.	*	212	240	15 kg	50 kg	A	52.	
	Sodium sulfide, hydrated with not less than 30 percent water.	* 8	UN1849	II	8	IB8, IP2, IP4, T3, TP33.	*	212	240	15 kg	50 kg	A	26, 52.	
G	Substances, explosive, n.o.s.	1.1L	UN0357	II	1.1L		None	62	None	Forbidden	Forbidden		8E, 14E, 15E, 17E.	
G	Substances, explosive, n.o.s.	1.2L	UN0358	II	1.2L		None	62	None	Forbidden	Forbidden		8E, 14E, 15E, 17E.	
G	Substances, explosive, n.o.s.	1.3L	UN0359	II	1.3L		None	62	None	Forbidden	Forbidden		8E, 14E, 15E, 17E.	
G	Substances, explosive, n.o.s.	1.1A	UN0473	II	1.1A	111	None	62	None	Forbidden	Forbidden	12.		
G	Substances, explosive, n.o.s.	1.1C	UN0474	II	1.1C		None	62	None	Forbidden	Forbidden	10.		
G	Substances, explosive, n.o.s.	1.1D	UN0475	II	1.1D		None	62	None	Forbidden	Forbidden	10.		
G	Substances, explosive, n.o.s.	1.1G	UN0476	II	1.1G		None	62	None	Forbidden	Forbidden	08.		
G	Substances, explosive, n.o.s.	1.3C	UN0477	II	1.3C		None	62	None	Forbidden	Forbidden	10.		
G	Substances, explosive, n.o.s.	1.3G	UN0478	II	1.3G		None	62	None	Forbidden	Forbidden	08.		
G	Substances, explosive, n.o.s.	1.4C	UN0479	II	1.4C		None	62	None	Forbidden	75 kg	09.		
G	Substances, explosive, n.o.s.	1.4D	UN0480	II	1.4D		None	62	None	Forbidden	75 kg	09.		
G	Substances, explosive, n.o.s.	1.4S	UN0481	II	1.4S		None	62	None	25 kg	75 kg	05.		
G	Substances, explosive, n.o.s.	1.4G	UN0485	II	1.4G		None	62	None	Forbidden	75 kg	08.		
G	Substances, explosive, very insensitive, n.o.s. or Substances, EVI, n.o.s.	1.5D	UN0482	II	1.5D		None	62	None	Forbidden	Forbidden	10.		

I	Sulfur	4.1	UN1350	III	4.1	30, IB8, IP3, T1, TP33.	None	240	25 kg	100 kg	A	19, 74.
*		*		*				*				
*	Tetraethylenepent-amine.	8	UN2320	III	8	IB3, T4, TP1	154	241	5 L	60 L	A	52.
*		*		*				*				
*	Trimethylchloro-sil-ane.	3	UN1298	II	3, 8	A3, A7, B77, IB2, N34, T7, TP2, TP13.	None	243	1 L	5 L	E	40.
*		*		*				*				
*	Vinylpyridines, sta-bilized.	6.1	UN3073	II	6.1, 3, 8	IB1, T7, TP2, TP13.	153	243	1 L	30 L	B	40, 52.
*		*		*				*				

\* \* \* \* \*

6. In Appendix B to § 172.101, the List of Marine Pollutants, the entry "Copper chloride" is amended by adding the designation "PP" in Column (1) and the entries "Alcohol C-13-C-15 poly (1-6) ethoxylate" and "1,2-Dichlorobenzene" are removed.

7. In § 172.102, paragraph (c)(1), Special provisions 15, 47, 77, 147, and 166 are revised; new Special provision 175 is added; Special provision 101 is removed; and in paragraph (c)(2), new Special provision A105 is added.

The revisions and additions 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, for example, are used for medical, analytical, diagnostic, testing, or repair purposes. For transportation by aircraft, materials forbidden for transportation by passenger aircraft or cargo aircraft may not be included in the kits. 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.

\* \* \* \* \*

47 Mixtures of solids that are not subject to this subchapter and flammable liquids may be transported under this entry without first applying the classification criteria of Division 4.1, provided there is no free liquid visible at the time the material is loaded or at the time the packaging or transport unit is closed. Except when the liquids are fully absorbed in solid material contained in sealed bags, each packaging must correspond to a design type that has passed a leakproofness test at the Packing Group II level. Small inner packagings consisting of sealed packets and articles containing less than

10 mL of a Class 3 liquid in Packing Group II or III absorbed onto a solid material are not subject to this subchapter provided there is no free liquid in the packet or article.

\* \* \* \* \*

77 Mixtures containing not more than 23.5% oxygen by volume may be transported under this entry when no other oxidizing gases are present. A Division 5.1 subsidiary risk label is not required for any concentrations within this limit.

\* \* \* \* \*

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 another Competent Authority. This provision may be used for both domestic and international shipments.

147 This entry applies to non-sensitized emulsions, suspensions, and gels consisting primarily of a mixture of ammonium nitrate and fuel, intended to produce a Type E blasting explosive only after further processing prior to use. The mixture for emulsions 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. The mixture for suspensions and gels typically has the following composition: 60-85% ammonium nitrate; 0-5% sodium or potassium perchlorate; 0-17% hexamine nitrate or monomethylamine nitrate; 5-30% water; 2-15% fuel; 0.5-4% thickening agent; 0-10% soluble flame suppressants; and trace additives. Other inorganic nitrate salts may replace part of the ammonium nitrate. These substances must satisfactorily pass Test Series 8 of the UN Manual of Tests and Criteria, Part I, Section 18 (IBR, see § 171.7 of this subchapter), and may not be classified and transported unless approved by the Associate Administrator.

\* \* \* \* \*

166 When transported in non-friable tablet form, calcium hypochlorite, dry, may be transported as a Packing Group III material.

\* \* \* \* \*

175 This substance must be stabilized when in concentrations of not more than 99%.

(2) \* \* \*

Code/Special Provisions

\* \* \* \* \*

A105 The total net quantity of dangerous goods contained in one package, excluding magnetic material, must not exceed the following:

- a. 1 kg (2.2 pounds) in the case of solids;
  - b. 0.5 L (0.1 gallons) in the case of liquids;
  - c. 0.5 kg (1.1 pounds) in the case of Division 2.2 gases; or
  - d. any combination thereof.
8. In § 172.202, paragraphs (a) and (b) are revised to read as follows:

§ 172.202 Description of hazardous material shipping papers.

(a) The shipping description of a hazardous material on the shipping paper must include:

- (1) The identification number prescribed for the material as shown in Column (4) of the § 172.101 table;
- (2) The proper shipping name prescribed for the material in Column (2) of the § 172.101 table;
- (3) 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.

In addition—

- (i) The words "Class" or "Division" may be included preceding the primary and subsidiary hazard class or division numbers.
- (ii) The hazard class need not be included for the entry "Combustible liquid, n.o.s."
- (iii) For domestic shipments, primary and subsidiary hazard class or division names may be entered following the numerical hazard class or division, or following the basic description.

(4) The packing group in Roman numerals, as designated for the hazardous material in Column (5) of the § 172.101 table. Class 1 (explosives) materials, self-reactive substances, organic peroxides and entries that are not assigned a packing group are excepted from this requirement. The packing group may be preceded by the letters "PG" (for example, "PG II"); and

(5) Except for transportation by aircraft, 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 kg" or "50 L." The following provisions also apply:

(i) For Class 1 materials, the quantity must be the net explosive mass. For an explosive that is an article, such as Cartridges, small arms, the net explosive mass may be expressed in terms of the net mass of either the article or the explosive materials contained in the article.

(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) For transportation by aircraft, the total net mass per package must be shown unless a gross mass is indicated in Columns (9A) or (9B) of the § 172.101 table in which case the total gross mass per package must be shown. The following provisions also apply:

(i) For empty, uncleaned packaging, only the number and type of packaging must be shown;

(ii) For chemical kits and first aid kits, the total net mass of hazardous materials must be shown. Where the kits contain solids and/or liquids, the net mass of liquids within the kits is to be calculated on a 1 to 1 basis, *i.e.*, 1 L equals 1 kg;

(iii) For dangerous goods in machinery or apparatus, the individual total quantities of dangerous goods in solid, liquid or gaseous state, contained in the article must be shown;

(iv) For dangerous goods transported in a salvage packaging, an estimate of the quantity of dangerous goods per package must be shown;

(v) For cylinders, total quantity may be indicated by the number of cylinders, for example, "10 cylinders;"

(vi) For items where "No Limit" is shown in Column (9A) or (9B) of the § 172.101 table, the quantity shown should be the net mass or volume of the material, except for UN2800, UN2807, UN3072, UN3166 and UN3173 where the quantity should be the gross mass of the article.

(7) The number and type of packages must be indicated. The type of packages must be indicated by description of the package (for example, "12 drums"). Indication of the packaging specification number ("1H1") may be included in the description of the package (for example, "12 1H1 drums" or "12 drums (UN 1A1)"). 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, "UN2744, Cyclobutyl chloroformate, 6.1, (8, 3), PG II."

\* \* \* \* \*

9. In § 172.312, paragraphs (a) introductory text, and (a)(2) introductory text are revised and a new paragraph (c)(7) is added to read as follows:

**§ 172.312 Liquid hazardous materials in non-bulk packaging.**

(a) Except as provided in this section, each non-bulk combination package having inner packagings containing liquid hazardous materials, single packaging fitted with vents, or open cryogenic receptacle intended for the transport of refrigerated liquefied gases must be:

(1) \* \* \*

(2) Legibly marked with package orientation markings that are similar to the illustration shown in this paragraph, on two opposite vertical sides of the package with the arrows pointing in the correct upright direction. The arrows must be either black or red on white or other suitable contrasting background and clearly visible commensurate with the size of the package. Depicting a rectangular border around the arrows is optional.

\* \* \* \* \*

(c) \* \* \*

(7) Class 7 radioactive material in type A, IP-2, IP-3, B(U), B(M) or C packages.

10. In § 172.407, paragraph (d)(2)(i) is amended by removing "; and" at the end of the paragraph and inserting a period in its place, and paragraph (d)(2)(i) is added to read as follows:

**§ 172.407 Label specifications.**

\* \* \* \* \*

(d) \* \* \*

(2) \* \* \*

(iii) White may be used for the symbol for the ORGANIC PEROXIDE label.

\* \* \* \* \*

11. Section 172.427 is revised to read as follows:

**§ 172.427 ORGANIC PEROXIDE label.**

(a) Except for size and color, the ORGANIC PEROXIDE label must be as follows:



(b) In addition to complying with § 172.407, the background on the ORGANIC PEROXIDE label must be red in the top half and yellow in the lower half.

12. Section 172.552 is revised to read as follows:

**§ 172.552 ORGANIC PEROXIDE placard.**

(a) Except for size and color, the ORGANIC PEROXIDE placard must be as follows:



(b) In addition to complying with § 172.519, the background on the ORGANIC PEROXIDE placard must be red in the top half and yellow in the lower half. The text, division number and inner border must be black; the symbol may be either black or white.

**PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS**

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

**Authority:** 49 U.S.C. 5101–5128, 44701; 49 CFR 1.45, 1.53.

14. Section 173.9 is revised to read as follows:

**§ 173.9 Transport vehicles or freight containers containing lading which has been fumigated.**

(a) For the purpose of this section, not including 49 CFR part 387, a rail car, freight container, truck body, or trailer in which the lading has been fumigated with any material, or is undergoing fumigation, is a package containing a hazardous material.

(b) No person may offer for transportation or transport a rail car, freight container, truck body, or trailer in which the lading has been fumigated or treated with any material, or is undergoing fumigation, unless the

FUMIGANT marking specified in paragraph (e) of this section is prominently displayed so that it can be seen by any person attempting to enter the interior of the transport vehicle or freight container. For domestic transportation, a hazard warning label authorized by EPA under 40 CFR part 156 may be used as an alternative to the FUMIGANT marking.

(c) No person may affix or display on a rail car, freight container, truck body,

or trailer the FUMIGANT marking specified in paragraph (e) of this section, unless the lading has been fumigated or is undergoing fumigation.

(d) The FUMIGANT marking required by paragraph (b) of this section must remain on the rail car, freight container, truck body, or trailer until the rail car, freight container, truck body, or trailer has been completely ventilated either by opening the doors of the unit or by mechanical ventilation to ensure no

harmful concentration of gas remains after fumigation has been completed.

(e) *FUMIGANT marking.* (1) The FUMIGANT marking must consist of red or black letters on a white background that is at least 30 cm (11.8 inches) wide and at least 25 cm (9.8 inches) high. Except for size and color, the FUMIGANT marking must be as follows:

# DANGER



THIS UNIT IS UNDER FUMIGATION  
WITH \* \_\_\_\_\_ APPLIED ON

Date \_\_\_\_\_

Time \_\_\_\_\_

Ventilated on \_\_\_\_\_

# DO NOT ENTER

(2) The “\*” shall be replaced with the technical name of the fumigant.

(f) A closed cargo transport unit that has been fumigated is not subject to any other provisions of this subchapter if it—

(1) Has been completely ventilated either by opening the doors of the unit or by mechanical ventilation after fumigation, and

(2) Displays the FUMIGANT marking, including the date of ventilation.

(g) For international shipments, transport documents should indicate the date of fumigation, type and amount of fumigant used, and instructions for disposal of any residual fumigant, including fumigation devices.

(h) Any person subject to the requirements of this section, solely due to the fumigated lading, must be informed of the requirements of this section and the safety precautions necessary to protect themselves and others in the event of an incident or accident involving the fumigated lading.

(i) Any person who offers for transportation or transports a rail car, freight container, truck body or trailer that is subject to this subchapter solely because of the hazardous materials designation specified in paragraph (a) of this section is not subject to any

requirements of this subchapter other than those contained in this section.

### § 173.35 [Amended]

15. In § 173.35, in paragraph (k), the wording “60.5 °C (141 °F)” is removed and the wording “60 °C (140 °F)” is added in its place.

16. In § 173.115, paragraphs (b)(1) and (k)(5) are revised to read as follows:

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

\* \* \* \* \*

(b) \* \* \*

(1) Exerts in the packaging an absolute pressure of 280 kPa (40.6 psia) or greater at 20 °C (68 °F), or is a cryogenic liquid, and

\* \* \* \* \*

(k) \* \* \*

(5) When the contents are classified as Division 6.1, PG III or Class 8, PG II or III, the aerosol must be assigned a subsidiary hazard of Division 6.1 or Class 8, as appropriate.

\* \* \* \* \*

### § 173.120 [Amended]

17. In § 173.120, in paragraphs (a) introductory text, (a)(2) and (b)(1), the wording “60.5 °C (141 °F)” is removed

and the wording “60 °C (140 °F)” is added each place it appears.

### § 173.121 [Amended]

18. In § 173.121, in the paragraph (a) table, in Column (2), for the entry Packing group “III,” the wording “≥23 °C, ≤60.5 °C (≥ 73 °F, ≤141 °F)” is removed and the wording “≥23 °C, ≤60 °C (≥73 °F, ≤140 °F)” is added in its place.

19. In § 173.124, a new paragraph (a)(2)(i)(D)(3) is added to read as follows:

### § 173.124 Class 4, Divisions 4.1, 4.2 and 4.3—Definitions.

(a) \* \* \*

(2) \* \* \*

(i) \* \* \*

(D) \* \* \*

\* \* \* \* \*

(3) It is an oxidizing substance in Division 5.1 containing less than 5.0% combustible organic substances; or

\* \* \* \* \*

20. In § 173.133, in paragraph (a)(1), the table is revised to read as follows:

### § 173.133 Assignment of packing group and hazard zones for Division 6.1 materials.

(a) \* \* \*

(1) \* \* \*

Packing group	Oral toxicity LD <sub>50</sub> (mg/kg)	Dermal toxicity LD <sub>50</sub> (mg/kg)	Inhalation toxicity by dusts and mists LC <sub>50</sub> (mg/L)
I .....	≤5.0 .....	≤50 .....	≤0.2.
II .....	>5.0 and ≤50 .....	>50 and ≤200 .....	>0.2 and ≤2.0.
III .....	>50 and ≤300 .....	>200 and ≤1000 .....	>2.0 and ≤4.0.

\* \* \* \* \*  
 21. In § 173.134, paragraph (a)(5) is revised to read as follows:

**§ 173.134 Class 6, Division 6.2—Definitions and exceptions.**

(a) \* \* \*  
 (5) *Regulated medical waste or clinical waste or (bio) medical waste* means a waste or reusable material derived from the medical treatment of an animal or human, which includes diagnosis and immunization, or from biomedical research, which includes the production and testing of biological products. Regulated medical waste or clinical waste or (bio) medical waste containing a Category A infectious substance must be classed as an infectious substance, and assigned to UN 2814 or UN 2900, as appropriate.

22. In § 173.136, paragraph (d) is removed and the last sentence in paragraph (a) is revised and to read as follows:

**§ 173.136 Class 8—Definitions.**

(a) \* \* \* A liquid, or a solid offered for transportation or transported as a liquid, that has a severe corrosion rate on steel or aluminum based on the criteria in § 173.137(c)(2) is also a corrosive material.

23. In § 173.137, paragraph (c)(2) is revised to read as follows:

**§ 173.137 Class 8—Assignment of packing group.**

(c) \* \* \*  
 (2) That do not cause full thickness destruction of intact skin tissue but exhibit a corrosion on steel or aluminum surfaces exceeding 6.25 mm (0.25 inch) a year at a test temperature of 55 C (130 F). The corrosion may be determined in accordance with the UN Manual of Tests and Criteria (IBR, see § 171.7 of this subchapter) or other equivalent test methods.

24. In § 173.159, paragraphs (a), (c)(1), (c)(2), (c)(4), (c)(5), (d)(1) and (e)(2) are revised to read as follows:

**§ 173.159 Batteries, wet.**

(a) Electric storage batteries, containing electrolyte acid or alkaline corrosive battery fluid, must be

completely protected so that short circuits will be prevented (e.g., by the use of non-conductive caps that entirely cover the terminals); they may not be packed with other materials except as provided in paragraphs (g) and (h) of this section and in §§ 173.220 and 173.222. 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 be adequately sealed to prevent leakage of electrolyte fluid in the event of spillage.

(c) \* \* \*  
 (1) Electric storage batteries protected against short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals) and firmly secured to skids or pallets capable of withstanding the shocks normally incident to transportation, are authorized for transportation by rail, highway, or water. The height of the completed unit must not exceed 1½ times the width of the skid or pallet. The unit must be capable of withstanding, without damage, a superimposed weight equal to two times the weight of the unit or, if the weight of the unit exceeds 907 kg (2000 pounds), a superimposed weight of 1814 kg (4000 pounds). Battery terminals must not be relied upon to support any part of the superimposed weight.

(2) Electric storage batteries weighing 225 kg (500 pounds) or more, consisting of carriers' equipment, may be shipped by rail when mounted on suitable skids and protected against short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals). Such shipments may not be offered in interchange service.

(4) Not more than four batteries not over 7 kg (15 pounds) each, packed in strong outer fiberboard or wooden boxes. Batteries must be securely cushioned and packed to prevent short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals). The maximum authorized gross weight is 30 kg (65 pounds).

(5) Not more than five batteries not over 4.5 kg (10 pounds) each, packed in strong outer fiberboard or wooden boxes. Batteries must be securely cushioned and packed to prevent short

circuits (e.g., by the use of non-conductive caps that entirely cover the terminals). The maximum authorized gross weight is 30 kg (65 pounds).

(d) \* \* \*  
 (1) The battery must be protected against short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals) and securely packaged;

(e) \* \* \*  
 (2) The batteries must be loaded or braced so as to prevent damage and short circuits in transit (e.g., by the use of non-conductive caps that entirely cover the terminals);

25. In § 173.166, paragraph (d)(1) is revised to read as follows:

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

(d) \* \* \*  
 (1) An air bag module or seat-belt pretensioner that has been approved by the Associate Administrator and is installed in a motor vehicle, aircraft, boat or other transport conveyance or its completed components, such as steering columns or door panels, is not subject to the requirements of this subchapter.

26. Section 173.187 is revised to read as follows:

**§ 173.187 Pyrophoric solids, metals or alloys, n.o.s.**

Packagings for pyrophoric solids, metals, or alloys, n.o.s. must conform to the requirements of part 178 of this subchapter at the packing group performance level specified in the § 172.101 Table. These materials must be packaged as follows:

(a) In steel boxes (4A) and contain not more than 15 kg (33 pounds) each.

(b) In wooden boxes (4C1, 4C2, 4D, or 4F) with inner metal receptacles which have a positive (not friction) means of closure and contain not more than 15 kg (33 pounds) each.

(c) In fiberboard boxes (4G) with inner metal receptacles which have a positive (not friction) means of closure and contain not more than 7.5 kg (17 pounds) each.

(d) In steel drums (1A1 or 1A2) with a gross mass not exceeding 150 kg (331 pounds) per drum.

(e) In plywood drums (1D) with inner metal receptacles which have a positive (not friction) means of closure and contain not more than 15 kg (33 pounds) each.

(f) In fiber drums (1G) with inner metal receptacles which have a positive (not friction) means of closure and contain not more than 15 kg (33 pounds) each.

(g) In specification cylinders, as prescribed for any compressed gas, except for Specifications 8 and 3HT.

27. In § 173.197, paragraph (a), the first sentence in paragraph (b), and the first sentence in paragraph (e)(2) are revised to read as follows:

**§ 173.197 Regulated medical waste.**

(a) *General provisions.* Non-bulk packagings, Large Packagings, and non-specification bulk outer packagings used for the transportation of regulated medical waste or clinical waste or (bio) medical waste must be rigid containers meeting the provisions of subpart B of this part.

(b) \* \* \* Except as provided in § 173.134(c) of this subpart, non-bulk packagings for regulated medical waste or clinical waste or (bio) medical waste must be UN standard packagings conforming to the requirements of Part 178 of this subchapter at the Packing Group II performance level. \* \* \*

(e) \* \* \*  
 (2) \* \* \* Liquid regulated medical waste or clinical waste or (bio) medical waste transported in a Large Packaging, Cart, or BOP must be packaged in a rigid inner packaging conforming to the provisions of subpart B of this part.

28. In § 173.216, paragraph (c)(3) is revised and paragraph (c)(4) is removed to read as follows:

**§ 173.216 Asbestos, blue, brown or white.**

(c) \* \* \*  
 (3) Bags or other non-rigid packagings which are dust and sift proof must be placed in rigid outer packagings or closed freight containers.

29. In § 173.220, paragraphs (b)(2)(ii)(B)(3), (c) and (d) are revised to read as follows:

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

(b) \* \* \*  
 (2) \* \* \*  
 (ii) \* \* \*  
 (B) \* \* \*

(3) In no part of the closed system shall the pressure exceed 5% of the maximum allowable working pressure of the system or 290 psig (2000 kPa), whichever is less; and

(c) *Battery powered or installed.* Batteries must be securely installed, and wet batteries fastened in an upright position. Batteries must be protected against short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals) and leakage or removed and packaged separately under § 173.159. Battery powered vehicles, machinery or equipment including battery powered wheelchairs and mobility aids are excepted from the requirements of this subchapter when transported by rail, highway or vessel.

(d) *Lithium batteries.* Except as provided in § 172.102, Special provision A102, of this subchapter, vehicles and machinery powered by primary lithium

batteries that are transported with these batteries installed are forbidden aboard passenger-carrying aircraft. Lithium batteries contained in vehicles or engines must be securely fastened in the battery holder of the vehicle or engine, and be protected in such a manner as to prevent damage and short circuits (e.g., by the use of non-conductive caps that entirely cover the terminals). Lithium batteries must be of a type that have successfully passed each test in the UN Manual of Tests and Criteria as specified in § 173.185, unless approved by the Associate Administrator. Equipment, other than vehicles or engines, containing lithium batteries must be transported in accordance with § 173.185.

30. In § 173.222, paragraph (d) is revised to read as follows:

**§ 173.222 Dangerous goods in equipment, machinery or apparatus.**

(d) Except for transportation by aircraft, when a package contains hazardous materials in two or more of the categories listed in paragraphs (c)(1) through (c)(3) of this section the total quantity required by § 172.202(c) of this subchapter to be entered on the shipping paper must be the aggregate quantity of all hazardous materials, expressed as net mass.

31. In § 173.224, in paragraph (b)(7), a new entry is added in appropriate alphabetical order to read as follows:

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

(b) \* \* \*  
 (7) \* \* \*

**SELF-REACTIVE MATERIALS TABLE**

Self-reactive substance	Identification No.	Concentration— (%)	Packing method	Control temperature—(°C)	Emergency temperature	Notes
(1)	(2)	(3)	(4)	(5)	(6)	(7)
Acetone-pyrogallol copolymer 2-diazo-1-naphthol-5-sulphonate .....	3228	100	OP8			
* * * * *	*	*	*		*	*

32. A new section § 173.230 is added to subpart E to read as follows:

**§ 173.230 Fuel cell cartridges containing flammable liquids.**

(a) A fuel cell cartridge is a container that stores fuel for controlled discharge

into fuel cell powered equipment through a valve. The cartridge must be designed and constructed to prevent the fuel from leaking during normal conditions of transportation and be free of electric charge generating components.

(b) Fuel cell cartridges containing flammable liquids including methanol or methanol/water solutions must conform to the following:

(1) The fuel cell cartridge design type without its packaging must be shown to pass an internal pressure test at a pressure of 15 psig (100 kPa);

(2) Fuel cell cartridges must be packaged in outer packagings which meet the requirements of part 178 at the Packing Group II performance level and conform to the general packaging requirements of subpart B of part 173; the following are authorized: 1A2, 1B2, 1D, 1G, 1H2, 4C1, 4C2, 4D, 4F, 4G, or 4H2.

(c) Fuel cell cartridges packed in or with equipment are excepted from the packaging requirements in paragraph (b)(2) if the cartridges are packed in a strong outer packaging conforming to the requirements of §§ 173.24 and 173.24a. For cartridges installed in equipment, the equipment may be considered the outer packaging if it provides an equivalent level of protection. The packaging need not conform to performance requirements of part 178 of this subchapter. The cartridges must be protected against damage that may be caused by the movement or placement of the equipment and the cartridges within the outer packaging.

33. In § 173.306, paragraph (i) is revised and a new paragraph (j) is added to read as follows:

**§ 173.306 Limited quantities of compressed gases.**

\* \* \* \* \*

(i) *Aerosols and receptacles small, containing gas with a capacity of less than 50 mL.* Aerosols, as defined in § 171.8 of this subchapter, and receptacles small, containing gas, with a capacity not exceeding 50 mL (1.7 oz.) 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. The pressure limit may be increased to 2000 kPa (290 psig) at 55 °C (131 °F) provided the aerosols are transported in outer packages that conform to the packaging requirements of Subpart B of this part. This provision does not apply to a self-defense spray (e.g., pepper spray).

(j) For additional exceptions, also see § 173.307.

**Appendix H to Part 173 [Amended]**

34. In Appendix H to Part 173, under heading 5. Procedure, in paragraph (h), the wording “60.5 °C (141 °F)” is removed and the wording “60 °C (140 °F)” is added each place it appears.

**PART 175—CARRIAGE BY AIRCRAFT**

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

**Authority:** 49 U.S.C. 5101–5128; 44701; 49 CFR 1.53.

36. In § 175.10, in paragraph (a)(2) introductory text, the first sentence is revised to read as follows:

**§ 175.10 Exceptions.**

\* \* \* \* \*

(a) \* \* \*  
(2) One packet of safety matches or a lighter intended for use by an individual when carried on one’s person or in carry-on baggage only. \* \* \*

\* \* \* \* \*

37. In § 175.78, paragraph (c)(4) is revised to read as follows:

**§ 175.78 Stowage compatibility of cargo.**

\* \* \* \* \*

(c) \* \* \*  
(4) **Note 1.** “Note 1” at the intersection of a row and column means the following:

(i) Only Division 1.4, Compatibility Group S, explosives are permitted to be transported aboard a passenger aircraft. Only certain Division 1.3, Compatibility Groups C and G, and Division 1.4, Compatibility Groups B, C, D, E, G and S, explosives may be transported aboard a cargo aircraft.

(ii) Explosives in Compatibility Group S may be stowed with explosives in all compatibility groups.

(iii) Except as otherwise provided in this Note, explosives of different compatibility groups may be stowed together whether or not they belong to the same division.

(iv) Division 1.4B and Division 1.3 explosives may not be stowed together. Division 1.4 explosives must be loaded into separate unit load devices and, when stowed aboard the aircraft, the unit load devices must be separated by other cargo with a minimum separation of 2 m (6.5 feet). When not loaded in unit load devices, Division 1.4 and Division 1.3 explosives must be loaded into different, non-adjacent loading positions and separated by other cargo with a minimum separation of 2 m (6.5 feet).

\* \* \* \* \*

**PART 176—CARRIAGE BY VESSEL**

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

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.53.

**§ 176.76 [Amended]**

39. In § 176.76, in paragraph (f)(2), the wording “141 °F” is removed and the wording “60 °C (140 °F)” is added in its place.

40. In § 176.83, paragraph (a)(4) is revised to read as follows:

**§ 176.83 Segregation.**

(a) \* \* \*  
(4) Segregation is not required:  
(i) Between hazardous materials of different classes which comprise the same substance but vary only in their water content (for example, sodium sulfide in Division 4.2 or Class 8) or quantity for Class 7 materials; or

(ii) Between hazardous materials of different classes which comprise a group of substances that do not react dangerously with each other. The following materials are grouped by compatibility:

(A) Hydrogen peroxide, aqueous solutions *with not less than 8 percent but less than 20 percent hydrogen peroxide (stabilized as necessary)*; Hydrogen peroxide, aqueous solutions *with not less than 20 percent but not more than 40 percent hydrogen peroxide*; Hydrogen peroxide, aqueous solutions *with more than 40 percent but not more than 60 percent hydrogen peroxide*; Hydrogen peroxide and peroxyacetic acid mixtures, stabilized *with acids, water and not more than 5 percent peroxyacetic acid*; Organic peroxide type D, liquid; Organic peroxide type E, liquid; Organic peroxide type F, liquid; and

(B) Dichlorosilane, Silicon tetrachloride, and Trichlorosilane.

\* \* \* \* \*

41. In § 176.84, in paragraph (b), in the Table of provisions, Codes “26,” “27,” “52” and “53” are revised, a new Code “144” is added in appropriate numerical order, and following the table, a new note “2” is added to read as follows:

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

\* \* \* \* \*

(b) \* \* \*

Code	Provisions
* * * * *	
26 .....	Stow “away from” acids. <sup>2</sup>
27 .....	Stow “away from” alkaline compounds. <sup>2</sup>
* * * * *	
52 .....	Stow “separated from” acids. <sup>1,2</sup>
53 .....	Stow “separated from” alkaline compounds. <sup>2</sup>
* * * * *	
144 .....	When stowed under deck, mechanical ventilation shall be in accordance with SOLAS regulation II-2/19 (II-2/54) for flammable liquids with flashpoint below 23 °C (73 °F).

Code	Provisions
* * * * *	

<sup>2</sup> Class 8 materials in PG II or III that otherwise are required to be segregated from one another may be transported in the same cargo transport unit, whether in the same packaging or not, provided the substances do not react dangerously with each other to cause combustion and/or evolution of considerable heat, or of flammable, toxic or asphyxiant gases, or the formation of corrosive or unstable substances; and the package does not contain more than 30 L (7.8 gallons) for liquids or 30 kg (66 lbs.) for solids.

**PART 178—SPECIFICATIONS FOR PACKAGINGS**

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

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.53.

43. In § 178.274, paragraph (j)(6) is revised to read as follows:

**§ 178.274 Specifications for UN portable tanks.**

\* \* \* \* \*

(j) \* \* \*

(6) Effective January 1, 2008, each new UN portable tank design type meeting the definition of “container” in the Convention for Safe Containers (CSC) (see 49 CFR 450.3(a)(2)) must be subjected to the dynamic longitudinal impact test prescribed in Part IV, Section 40 of the UN Manual of Tests and Criteria (see IBR, § 171.7 of this subchapter). A UN portable tank design type impact-tested prior to January 1, 2008, in accordance with the requirements of this section in effect on October 1, 2005, need not be retested. UN portable tanks used for the dedicated transportation of “Helium, refrigerated liquid,” UN 1963, and “Hydrogen, refrigerated liquid,” UN 1966, that are marked “NOT FOR RAIL TRANSPORT” in letters of a minimum height of 10 cm (4 inches) on at least two sides of the portable tank are excepted from the dynamic longitudinal impact test.

\* \* \* \* \*

**§ 178.602 [Amended]**

44. In § 178.602, in paragraph (b), the second sentence is amended by adding the wording “containing solids” after the word “Bags”.

45. In § 178.810, paragraph (b) is revised to read as follows:

**§ 178.810 Drop test.**

\* \* \* \* \*

(b) *Special preparation for the drop test.* (1) Metal, rigid plastic, and composite IBCs intended to contain solids must be filled to not less than 95 percent of their maximum capacity, or if intended to contain liquids, to not less than 98 percent of their maximum capacity. Pressure relief devices must be removed and their apertures plugged or rendered inoperative.

(2) Fiberboard and wooden IBCs must be filled with a solid material to not less than 95 percent of their maximum capacity; the contents must be evenly distributed.

(3) Flexible IBCs must be filled to the maximum permissible gross mass; the contents must be evenly distributed.

(4) Rigid plastic IBCs and composite IBCs with plastic inner receptacles must be conditioned for testing by reducing the temperature of the packaging and its contents to –18 °C (0 °F) or lower. Test liquids must be kept in the liquid state, if necessary, by the addition of anti-freeze. Water/anti-freeze solutions with a minimum specific gravity of 0.95 for testing at –18 °C (0 °F) or lower are considered acceptable test liquids, and may be considered equivalent to water for test purposes. IBCs conditioned in this way are not required to be conditioned in accordance with § 178.802.

\* \* \* \* \*

**PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS**

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

**Authority:** 49 U.S.C. 5101–5128; 49 CFR 1.53.

47. In § 180.352, paragraphs (b) introductory text, (b)(1) and (g) are revised to read as follows:

**§ 180.352 Requirements for retest and inspection of IBCs.**

\* \* \* \* \*

(b) *Test and inspections for metal, rigid plastic, and composite IBCs.* Each IBC is subject to the following test and inspections:

(1) Each IBC intended to contain solids that are loaded or discharged under pressure or intended to contain liquids must be tested in accordance with the leakproofness test prescribed in § 178.813 of this subchapter prior to its first use in transportation and every 2.5 years thereafter, starting from the date of manufacture or the date of a repair conforming to paragraph (d)(1) of this section. For this test, the IBC is not required to have its closures fitted.

\* \* \* \* \*

(g) *Record retention.* (1) 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 or remanufactured.

(2) 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 test or inspections, and test or inspection specifics and results.

(3) 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.

Issued in Washington, DC, on August 23, 2006.

Under authority delegated in 49 CFR part 106.

**Robert A. McGuire,**

*Associate Administrator for Hazardous Materials Safety.*

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