

**DEPARTMENT OF TRANSPORTATION****Research and Special Programs Administration**

**49 CFR Parts 171, 172, 173, 174, 175, 176, 177, 178 and 180**

[Docket No. RSPA-98-4185 (HM-215C)]

RIN 2137-AD15

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

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

**ACTION:** Final rule.

**SUMMARY:** This final rule consolidates Docket HM-215C and HM-217 ("Labeling Requirements for Poisonous Materials"). RSPA is amending the Hazardous Materials Regulations (HMR) to maintain alignment with international standards by incorporating numerous changes to proper shipping names, hazard classes, packing groups, special provisions, packaging authorizations, air transport quantity limitations and vessel stowage requirements. In addition, RSPA is making other amendments to the HMR, including eliminating the "Keep Away From Food" label for poisonous materials in Division 6.1, Packing Group III. Because of recent changes to the International Maritime Dangerous Goods Code (IMDG Code), the International Civil Aviation Organization's Technical Instructions for the Safe Transport of Dangerous Goods by Air (ICAO Technical Instructions), and the United Nations Recommendations on the Transport of Dangerous Goods (UN Recommendations), these revisions are necessary to facilitate the transport of hazardous materials in international commerce.

**DATES: Effective Date:** October 1, 1999.

**Voluntary Compliance Date:** RSPA is authorizing immediate voluntary compliance, with the exception of the provisions contained in § 173.301(i). Persons voluntarily complying with these regulations should be aware that petitions for reconsideration may be received and, as a result of RSPA's evaluation of those petitions, the amendments adopted in this final rule could be subject to further revision.

**Delayed Compliance Date:** Unless otherwise specified, compliance with the amendments adopted in this final rule is required beginning on October 1, 2000.

*Incorporation by Reference Date:* The incorporation by reference of publications listed in this final rule has been approved by the Director of the **Federal Register** as of October 1, 1999.

**FOR FURTHER INFORMATION CONTACT:** Bob Richard, Assistant International Standards Coordinator, telephone (202) 366-0656, or Joan McIntyre, Office of Hazardous Materials Standards, telephone (202) 366-8553, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, S.W., Washington, D.C. 20590-0001.

**SUPPLEMENTARY INFORMATION:**

**I. Introduction**

This final rule consolidates two rulemakings; Docket HM-215C, "Harmonization with the UN Recommendations, IMDG Code and ICAO Technical Instructions" and the previous Docket HM-217, "Labeling Requirements for Poisonous Materials." By publication of Docket HM-215C notice of proposed rulemaking (NPRM) [63 FR 44312], Docket HM-217 was terminated as a separate rulemaking action.

**II. Background**

On December 21, 1990, RSPA published a final rule [Docket HM-181; 55 FR 52402] which comprehensively revised the Hazardous Materials Regulations (HMR), 49 CFR Parts 171 to 180, with respect to hazard communication, classification, and packaging requirements, based on the UN Recommendations. One intended effect of the rule was to facilitate the international transportation of hazardous materials by ensuring a basic consistency between the HMR and international regulations.

The UN Recommendations are not regulations, but are recommendations issued by the UN Committee of Experts on the Transport of Dangerous Goods. These recommendations are amended and updated biennially by the UN Committee of Experts and are distributed to nations throughout the world. They serve as the basis for national, regional, and international modal regulations (specifically the IMDG Code, issued by the International Maritime Organization (IMO), and the ICAO Technical Instructions, issued by the ICAO Dangerous Goods Panel). In 49 CFR 171.12, the HMR authorize hazardous materials shipments prepared in accordance with the IMDG Code if all or part of the transportation is by vessel, subject to certain conditions and limitations. Offering, accepting and transporting hazardous materials by

aircraft, in compliance with the ICAO Technical Instructions, and by motor vehicle either before or after being transported by aircraft, are authorized in § 171.11 (subject to certain conditions and limitations).

On December 29, 1994, RSPA published a final rule [Docket HM-215A; 59 FR 67390] amending the HMR by incorporating changes to more fully align the HMR with the seventh and eighth revised editions of the UN Recommendations, Amendment 27 to the IMDG Code and the 1995-96 ICAO Technical Instructions. The final rule provided consistency with international air and sea transportation requirements which became effective January 1, 1995.

On May 6, 1997, RSPA published a final rule [Docket HM-215B; 62 FR 24690] amending the HMR by incorporating changes to more fully align the HMR with the ninth revised edition of the UN Recommendations, Amendment 28 to the IMDG Code and the 1997-1998 ICAO Technical Instructions. The final rule provided consistency with international air and sea transportation requirements which became effective January 1, 1997.

In a final rule published October 29, 1998 (Docket HM-215C; 63 FR 57929), RSPA incorporated by reference the latest editions of the ICAO Technical Instructions and the IMDG Code into the HMR. This action ensured that international shippers could begin complying with changes to international air and vessel standards, which become effective on January 1, 1999, in the event that this final rule was not published by that date. In addition, the October 29, 1998 final rule amended a shipping paper requirement for the use of the ICAO Technical Instructions.

This final rule amends the HMR based on the tenth revised edition of the UN Recommendations, the 1999-2000 ICAO Technical Instructions, and Amendment 29 to the IMDG Code with the intent to more fully align the HMR with international air and sea transport requirements which became effective January 1, 1999. Petitions for rulemaking pertinent to harmonization with international standards and the facilitation of international transportation were also considered and are the basis of certain changes incorporated in this final rule. Other changes are based on feedback from the regulated industry and RSPA initiatives.

**III. Summary and Overview**

On August 18, 1998, RSPA published an NPRM (Docket HM-215C; 63 FR 44312) to continue its efforts to facilitate the transport of hazardous materials in international commerce. RSPA received

approximately 30 comments in response to the NPRM. These comments were submitted by industry associations representing chemical manufacturers and distributors and packaging manufacturers and reconditioners. Comments were also submitted from a gas strut manufacturer, a battery manufacturer, a chemical manufacturer, a paint manufacturer and distributor, and Transport Canada. Commenters expressed support of RSPA's effort to align the HMR with international standards to provide consistency and facilitate the international transportation of hazardous materials. The majority of commenters supported various proposals, but some commenters raised concerns and recommended alternative amendments to certain proposals which are discussed in Section IV of this final rule. Some commenters suggested amendments which are beyond the scope of this final rule and must first be subject to an NPRM to provide adequate opportunity for notice and comments. These issues may be addressed in separate rulemakings.

Amendments to the HMR contained in this final rule include:

- Addition of a new approval provision to allow use of recycled plastics material for the manufacturing of plastic drums and jerricans.
- Amendments to the Hazardous Materials Table (HMT) which add, revise or remove certain proper shipping names, hazard classes, packing groups, special provisions, including portable tank requirements, packaging authorizations, bulk packaging requirements, and passenger and cargo aircraft maximum quantity limitations.
- Amendments to the List of Marine Pollutants which remove, revise and add certain entries.
- Amendments to remove, revise and add certain special provisions, including one new special provision to deregulate cotton under specific conditions.
- Amendment of the n.o.s. and generic proper shipping names which are required to be supplemented with technical names in association with the basic description.
- Incorporation of provisions authorizing the reconditioning of packagings other than metal drums.
- Incorporation of four new shipping descriptions to more clearly describe internal combustion engines and vehicles powered by flammable liquid and flammable gas fuels.
- Elimination of the KEEP AWAY FROM FOOD label for poisonous

materials in Division 6.1, Packing Group III. Requiring the use of a POISON or TOXIC label on packagings containing materials meeting the toxicity criteria for poisonous materials in Division 6.1, Packing Group III. Allowing optional text on, or adjacent to, the POISON or TOXIC label to read "PG III."

- Addition of reciprocity provisions for Canadian cylinders.
- Amendment of continuing requalification requirements for portable tanks and intermediate bulk containers (IBCs) which are intended for the transport of a single material.
- Addition of requirements for limited quantity packagings containing fragile inner packagings.
- Incorporation of an exception for certain shock absorbers, struts, gas springs and shocks and other automobile energy absorbing articles.
- Amendment of IBC repair, qualification and maintenance requirements.

#### IV. Section-by-Section Summary of Regulatory Changes

##### Part 171

*Section 171.2.* RSPA is amending paragraph (d)(1) by adding the letters "CTC" to the list of specification indications which may not be misrepresented according to § 171.2(c). This is necessary as a result of a new provision in § 173.301(i) authorizing the use of CTC specification cylinders under certain conditions.

*Section 171.7.* RSPA is updating the incorporation by reference for four American Society of Mechanical Engineers (ASTM) standards, one American Pyrotechnics Association (APA) standard, one Department of Defense (DOD) standard, and the UN Recommendations. The ICAO Technical Instructions were updated to the 1999–2000 edition and the IMDG Code was updated to Amendment 29, in a final rule, published October 29, 1998 [Docket HM–215C; 63 FR 44312] and effective January 1, 1999. One new incorporation by reference is added under the International Organization for Standardization (ISO).

"ASTM D 3278—95 Standard Test Methods for Flash Point of Liquids by Small Scale (Setaflash) Closed-Cup Apparatus" is updated to the 1996 edition. "ASTM D 56-93 Standard Test Method for Flash Point by Tag Closed Tester," "ASTM D 93–94 Standard Test Method for Flash Point by Pensky-Martens Closed Cup Tester" and "ASTM D 3828–93 Standard Test Method for Flash Point by Small Scale Closed Tester" are updated to the 1997

editions. These updates reflect the latest revisions to these standards which are used for the classification of Class 3 flammable liquids in §§ 173.120 and 173.121. "APA Standard 87–1, Standard for Construction and Approval for Transportation of Fireworks, Novelties, and Theatrical Pyrotechnics" is updated to the January 23, 1998 version which brings the standards up to date with current industry practices. "DOD TB 700–2; NAVSEAINST 8020.8; AFTO 11A–1–47; DLAR 8220.1: Explosives Hazard Classification Procedure" is updated to the January 1998 edition. References to the UN Recommendations are updated to the tenth revised edition and an incorrect reference to § 172.519 is removed in the second column. RSPA reviewed the updated standards and concluded that no major technical amendments have been incorporated into these standards.

Finally, consistent with the addition of a new special provision for the entry "Cotton," NA1365, "ISO 8115, Cotton Bales—Dimensions and Density, 1986 Edition" is added to the table of material incorporated by reference. (See the amendments to the Hazardous Materials Table.)

*Section 171.8.* The text for the "N.O.S." definition is revised to reflect the changes in this final rule regarding the addition of a new symbol to specify the n.o.s. and generic proper shipping names which are required to be supplemented with a technical name. (See the preamble discussion under §§ 172.101(b) and 172.203(k)(3)).

*Sections 171.11, 171.12 and 171.12a.* Paragraphs (d)(14), (b)(17) and (b)(16) of §§ 171.11, 171.12 and 171.12a, respectively, are revised for consistency with § 173.306(a)(1) which provides certain exceptions for limited quantities of compressed gases in containers of not more than four fluid ounces.

*Section 171.12a.* The amendments proposed to this section in the NPRM providing for reciprocity for certain Canadian specification cylinders to be transported within the U.S. will be incorporated into § 173.301(i). See preamble discussion under § 173.301.

*Section 171.14.* Paragraph (d) is revised to provide a delayed implementation date for amendments adopted in this final rule. The effective date of the final rule is October 1, 1999. However, RSPA is authorizing an immediate voluntary compliance date to allow shippers to prepare their shipments in accordance with the new ICAO, IMDG Code and HMR provisions. RSPA is also authorizing a delayed mandatory compliance date with the new requirements until October 1, 2000. This delay offers a sufficient phase-in

period to implement new provisions and deplete current stocks of shipping papers, labels, placards and packagings affected by the new requirements. In addition, paragraph (d)(2) permits intermixing of old and new hazard communication requirements until October 1, 2000. As stated in the NPRM, based on its own initiative and comments provided in petitions, RSPA is extending a delayed implementation period for use of the POISON label for Division 6.1, Packing Group III materials and allowing continued use of the KEEP AWAY FROM FOOD label until October 1, 2003.

#### Part 172

**Section 172.101.** RSPA received favorable comments for including the addition of a new symbol to § 172.101(b) and the Hazardous Materials Table (HMT) to denote the n.o.s. and generic proper shipping names which are required to be supplemented with the technical name of the hazardous material (in parentheses and in association with the basic description). In the NPRM, RSPA proposed using the asterisk (\*) as the new symbol. It has since been brought to RSPA's attention that the asterisk symbol poses a problem for computer searches. Therefore, in this final rule, RSPA is replacing the asterisk symbol with the letter "G" to identify n.o.s. and generic proper shipping names which must meet the technical name requirement. Previously, these proper shipping names were listed in § 172.203(k)(3). The change is adopted in this final rule to simplify and improve the use of the HMR. As a result of the change, § 172.203(k)(3) is removed. In addition, approximately 19 new proper shipping names are added to be required to be supplemented with a technical name. The technical name requirement for these entries are consistent with the UN Recommendations. As discussed in the NPRM, certain proper shipping names are currently required to be supplemented with a technical name in the UN Recommendations. However, in the opinion of RSPA, these entries do not warrant a supplemental technical name. The majority of these are pesticides with proper shipping names which RSPA believes are sufficiently descriptive. RSPA believes that requiring these proper shipping names to be supplemented with technical names adds minimal value for emergency response purposes while introducing an unwarranted burden on the shipper. On this basis, RSPA is not adopting the technical name requirement for these proper shipping names. Readers should be aware that

certain n.o.s. and generic proper shipping names may be required to be supplemented with technical names when being transported internationally. In addition, based on its own initiative, RSPA is adding or removing certain proper shipping names concerning the technical name requirement for consistency with the tenth revised edition of the UN Recommendations. (See preamble discussion under § 172.203.)

A commenter stated that the plus (+) sign is not an appropriate symbol to denote materials classified on the basis of human experience because it is used for other purposes in the HMR. RSPA does not agree with the commenter that the plus sign is an inappropriate symbol and points out that the plus sign is presently used in the HMR to indicate materials classified on the basis of human experience. In the NPRM, RSPA proposed to add the plus sign to additional materials which are classified on the basis of human experience consistent with the UN Recommendations. RSPA is not convinced that there would be any benefit in using a different symbol.

Another commenter expressed concern that the proposal to add a plus sign to Column (1) of the HMT for epichlorohydrin on the basis of human experience would cause his company economic hardship. The commenter stated that, if adopted, the classification would be fixed for every mixture or solution containing epichlorohydrin, including very dilute solutions of epichlorohydrin in water even if the mixtures or solutions do not meet the criteria for hazard classification in the HMR. In response to this comment, RSPA notes that a mixture or solution containing epichlorohydrin where the hazard is significantly different from that of the pure material should be evaluated on the basis of classification criteria. If such a mixture or solution does not meet the corresponding hazard class, a different proper shipping name may be used. Therefore, RSPA is adopting, as proposed, the plus sign for epichlorohydrin and other materials identified in the NPRM.

**The Hazardous Materials Table (HMT).** Amendments to the HMT for the purpose of harmonizing with the tenth revised edition of the UN Recommendations include the following:

The plus (+) sign is added to Column 1 to fix the proper shipping name, hazard class and packing group for the entries, "Aminophenols (*o*-*m*-*p*-)," "Chlorodinitrobenzenes," "Dichloroanilines, liquid," "Dichloroanilines, solid," "o-

Dichlorobenzene," "N,N-Diethylaniline," "Epichlorohydrin," "Nitroanilines (*o*-*m*-*p*-)," "Nitroanisole," "Nitrobenzene," "Nitrophenols (*o*-*m*-*p*-)," "Phenetidines," "Phenylenediamines (*o*-*m*-*p*-)," "Toluene diisocyanate," "Toluidines, liquid" and "Toluidines, solid." This action aligns the HMR with the UN Recommendations which use Special Provision 279 to indicate materials which are classified on the basis of human experience.

Various other changes to the HMT include the following:

A number of hazardous materials proper shipping names are revised, including the deletion of the word "commercial" from the entries, "Charges, shaped, commercial, without detonator," (UN 0059, 0439, 0440 and 0441), the revision of the entry "Amyl alcohols" to "Pentanol" and the revision of the entry "Dithiocarbamate pesticides, liquid, toxic" to "Thiocarbamate pesticide, liquid, toxic."

For entries such as "Aluminum alkyls" and "Sodium nitrite," the subsidiary risks are revised. A typographical error in the NPRM's regulatory text for the entry "Sodium nitrite" resulted in omitting the primary hazard and is corrected in this final rule.

The entries, "Aviation regulated liquid, n.o.s." and "Aviation regulated solid, n.o.s." are added for alignment with the ICAO Technical Instructions and the UN Recommendations.

The entry "Wheel chair, electric" is removed as a proper shipping name and an italicized entry is added to refer users of the HMR to the proper shipping name "Battery-powered vehicle or Battery-powered equipment." RSPA received a comment requesting a revision to § 175.10(a)(20)(iv)(C) which requires the packaging to be marked "Battery, wet, with wheelchair" and which the commenter referred to as a proper shipping name. The commenter stated that the proper shipping name is not in the HMT. RSPA points out that in § 175.10(a)(20)(iv)(C), "Battery, wet, with wheelchair" is a marking and not a proper shipping name. On this basis, RSPA has made no changes to § 175.10(a)(20)(iv)(C).

For materials such as "Chlorosilanes, corrosive, n.o.s." Column 7 is revised to reflect the alignment of the portable tank assignments with those in the UN Recommendations.

In the NPRM, RSPA proposed to revise the Column (7) special provisions relating to portable tanks, for the entry, "Corrosive liquids, toxic, n.o.s.," UN2922, for Packing Groups I and II. A

commenter pointed out that the revisions are not consistent with the UN Recommendations. RSPA agrees with the commenter and is not adopting the proposed revisions.

For the entry, "Plastic molding compounds *in dough, sheet or extruded rope form evolving flammable vapor*," to correct an error, the non-bulk packaging authorization reference is revised to read "221." In addition, § 173.221 is amended to authorize bulk packagings. The packaging authorization for the entry, "Polymeric beads, expandable, *evolving flammable vapor*" is revised to read "221." (See additional preamble discussion under § 173.221.)

For the entries, "Batteries, wet, filled with acid, *electric storage*" and "Batteries, wet, filled with alkali, *electric storage*" RSPA is increasing the passenger aircraft quantity limitation from 25 kg gross mass to 30 kg gross mass. This change is consistent with the amendments to the 1999–2000 edition of the ICAO Technical Instructions.

In response to a petition for rulemaking (P–1316), RSPA proposed that baled cotton not meeting the criteria of any hazard class would be excepted from the requirements of the HMR under certain conditions. In this final rule, RSPA is adding a new special provision for NA1365, "Cotton" (dry), to exclude it from the HMR when it is baled in accordance with ISO 8115, "Cotton Bales—Dimensions and Density" to a density of at least 360 kg/m<sup>3</sup> (22.4lb/ft<sup>3</sup>) and it is transported in a freight container or closed transport vehicle. This action is consistent with a decision taken by the IMO and a subsequent competent authority approval issued by RSPA.

As proposed in the NPRM, based on its own initiative, RSPA is adding a new entry, "Dangerous goods in machinery or Dangerous goods in apparatus" to the HMT. The proper shipping name is assigned identification number, NA8001, and Special Provision 136 is added for directions on class assignment. As stated in the NPRM, this entry was adopted in the ICAO Technical Instructions to provide an exception from the UN packaging performance tests for equipment, machinery or apparatus containing small quantities of hazardous materials. RSPA believes this entry is useful for transport by all modes of transportation and provides a more practical means of describing machinery or apparatus, containing small quantities of hazardous materials, when the machinery or apparatus is not specifically listed in the HMT. A commenter suggested that the proper shipping name be given a Class

9 assignment. RSPA agrees with the commenter. RSPA proposed to the UN Committee of Experts that a UN number and proper shipping name be provided and that Class 9 be assigned. Following the Committee's response, RSPA will address this issue in a future rulemaking.

A commenter requested that RSPA not adopt the proposed change for the entry, "Chloropicrin." In the NPRM, RSPA proposed to change the non-bulk packaging authorization cite in Column (8B) from § 173.227 to § 173.193. The proposed change was in error and RSPA is not adopting this change.

Concerning the new entry, "Nitroglycerin mixture, desensitized, liquid, flammable, n.o.s.," UN3343, RSPA received a comment questioning the impact that the new entry would have on existing competent authority approvals. These competent authority approvals provide for these materials to be described as "Flammable liquids, n.o.s.," UN1993. The commenter asked RSPA to consider "grandfathering the existing approvals in the final rule." It is RSPA's position that to reflect the new shipping description, these approvals can be updated upon a request from the approval holders. RSPA believes that the transition periods adopted in this final rule will provide sufficient time for processing updated approvals in order to avoid any potential inconvenience on the part of approval holders.

The Vessel Operators Hazardous Materials Association (VOHMA) requested that RSPA consider including the alpha-numeric special provisions corresponding to the codes in § 176.84 for materials identified as requiring stowage "away from" foodstuffs or "separated from" foodstuffs. VOHMA stated that this action would provide consistent identification of the materials for proper stowage and segregation when being transported by vessel. RSPA believes VOHMA's request has merit and will consider it in a future NPRM to afford the public the opportunity to provide comments.

Readers should be aware that for certain entries in the HMT, such as those with revised proper shipping names, the change may appear as a removal and addition. Readers should review all changes appearing in the § 172.101 HMT for a complete view of the changes.

*Appendix B to § 172.101.* A number of materials are added, removed or amended in the HMR's List of Marine Pollutants. The amendments are consistent with the marine pollutants identified in Amendment 29 to the IMDG Code. One entry, "Nitrates,

inorganic, n.o.s.," which was mistakenly referred to in the NPRM's preamble as being proposed for removal, was actually removed from the marine pollutant list in an earlier final rule published under Docket HM–215B (May 6, 1997; 62 FR 24743).

*Section 172.102.* Eleven new special provisions are added and one is removed for consistency with the tenth revised edition of the UN Recommendations; three obsolete special provisions are removed; and two are editorially revised as follows:

Special Provision 43 is amended by adding an exception for certain nitrocellulose membrane filters. The exception is consistent with the 1999–2000 edition of the ICAO Technical Instructions.

Special Provision 125 is revised to correct an editorial error for the percentages of phlegmatizers in mixtures.

A new special provision 129 is assigned to the new entry, "Nitroglycerin mixture, desensitized, liquid, flammable, n.o.s. *with not more than 30% nitroglycerin, by mass*" to require that the material's classification, transportation, packing group assignment and packaging must be approved by the Associate Administrator for Hazardous Materials Safety.

A new special provision 130 is added for the entry, "*Battery, dry, not subject to the requirements of this subchapter*" to identify conditions that must be met before the material may be excepted from the HMR.

A new special provision 131 is assigned to the new entry, "Flammable solid, oxidizing, n.o.s.," (Packing Groups II and III), to prohibit the material from being offered for transportation unless approved by the Associate Administrator for Hazardous Materials Safety.

A new special provision 132 is added for the proper shipping name, "Ammonium nitrate fertilizers," UN2071. The special provision allows this material to be excepted from the requirements of the HMR provided a UN trough test (Section 38, UN Manual of Test and Criteria) demonstrates that the material is not liable to self-sustaining decomposition, and that the material does not contain an excess of nitrate greater than 10% by mass. This material is only regulated when offered for transportation by aircraft and vessel modes.

A new special provision 133 is added for the new entry, "Air bag inflators, compressed gas or Air bag modules, compressed gas or Seat-belt pretensioners, compressed gas," to

clarify which articles should be transported under these shipping descriptions. The special provision provides conditions for packaging and design of these articles. In the NPRM, RSPA inadvertently included articles containing a Division 2.1 gas for which authorization for transportation is being retained under an exemption. This error is corrected in this final rule. The air bag and seat-belt pretensioner descriptions listed in the HMT may be used only for articles that may be excluded from Class 1.

A new special provision 134 is added for the entry "Battery-powered vehicle or Battery-powered equipment" to identify the entry as being used for battery-powered equipment or vehicles.

A new special provision 135 is added for the new entries, "Engines, internal combustion, flammable gas powered," "Engines, internal combustion, flammable liquid powered," "Vehicle, flammable gas powered," and "Vehicle, flammable liquid powered" to indicate the appropriate shipping description to be used when internal combustion engines are installed in a vehicle.

A new special provision 136 is added for the new entry, "Dangerous goods in machinery or Dangerous goods in apparatus." The special provision clarifies the restrictions and exceptions for transporting hazardous materials under the new entry. (Also, see preamble discussion under "The Hazardous Materials Table.")

A new special provision 137 is added for the entry, "Cotton," NA1365. See preamble discussion under "The Hazardous Materials Table (HMT)."

A new special provision 138 is added for the entry, "Lead compounds, soluble, n.o.s." This special provision clarifies the definition for soluble lead compounds.

A new special provision A35 is added for the new entries, "Aviation regulated liquid, n.o.s." and "Aviation regulated solid, n.o.s.," to clarify that the proper shipping names include any substance not meeting any of the other hazard classes, but which has certain properties that could cause extreme annoyance or discomfort in the event of spillage or leakage aboard aircraft to crew members so as to prevent their performance of duties.

Special Provision 17 applies to the entry, "Hydrogen peroxide, aqueous solutions *with not less than 8 percent but less than 20 percent hydrogen peroxide (stabilized as necessary).*" Special Provision 17 would be deleted because the information it contains is duplicative with the italicized portion of the proper shipping name.

Special Provision 20 is removed because it no longer is used for any entries in the HMT.

Special Provision 104 is removed for consistency with the UN Recommendations and in response to a petition for rulemaking filed by the Institute of Makers of Explosives (P-1317).

As proposed in the NPRM and based on a previous comment received by RSPA, Special Provision B101 is editorially revised to clarify that when intermediate bulk containers are used, only those constructed of metal are authorized.

Special Provision N9 applies to the entry, "Cotton waste, oily," UN1364. Special Provision N9 is deleted, consistent with the deletion of Special Provision 34 in the tenth revised edition of the UN Recommendations.

*Section 172.203.* In § 172.203, paragraph (k) is revised to reflect that the letter "G" in Column (1) of the HMT identifies n.o.s. and generic proper shipping names requiring a technical name. (See preamble discussion under § 172.101.)

*Section 172.313.* A new paragraph (d) is added to reflect that "PG III" may be marked adjacent to the POISON label as an alternative to displaying the text "PG III," instead of "Poison" or "Toxic," below the mid-line of the label. (See preamble discussion under §§ 172.400 and 172.400a.)

*Sections 172.400, 172.400a.*

For poisonous materials in Division 6.1, Packing Group III, RSPA proposed in the NPRM to eliminate the KEEP AWAY FROM FOOD label and require the use of a POISON label on such packagings. RSPA also proposed to allow optional text on the POISON label to read "PG III," instead of "POISON" or "TOXIC." (Readers should refer to the NPRM for background information.) RSPA received approximately ten comments regarding this issue.

Some of the commenters had concerns about international acceptance and harmonization of the "PG III" text. Several commenters suggested that RSPA delay consideration and revisit the issue in a future rulemaking to allow more time for comments and to wait until the international community adopts the provisions. One commenter requested that RSPA retain the KEEP AWAY FROM FOOD label as an alternate label. Because provisions in international regulations permit the insertion of text indicating the nature of the risk, it is RSPA's opinion that a POISON label displaying "PG III" as text is acceptable in international transportation. Furthermore, RSPA believes that sufficient time for

comment has been offered for comments and consideration of the provisions. RSPA published an ANPRM on November 8, 1993, under Docket HM-217 (58 FR 59224), and published an NPRM on August 18, 1998 NPRM, under Docket HM-215C, addressing changes to Division 6.1, Packing Group III labeling requirements consistent with an amendment incorporated in the eighth revised edition of the UN Recommendations. Two commenters requested that RSPA consider hazardous materials employee training and cost impact when considering implementation of the change. RSPA gave consideration to these issues before publishing the NPRM, and as explained in the NPRM, and is providing a sufficient phase-in period to implement the new provisions for training and minimizes any additional costs that may be incurred.

The Air Line Pilots Association (ALPA) stated its opposition to placing only the "PG III" marking on the POISON label. ALPA stated that placing the "PG III" marking on the label without the "POISON" or "TOXIC" text would not be understood by hazardous materials employees who are performing loading functions. RSPA disagrees. Section 172.401(c) allows packages of hazardous materials bearing labels which are in conformance with the UN Recommendations, ICAO Technical Instructions, IMDG Code and Canadian TDG Regulations, to be shipped in the U.S. These labels do not have text indicating the hazard, but display pictorial hazard warning symbols, which are internationally recognized.

Most commenters supported an alternative label for Packing Group III, however, a few commenters suggested that RSPA consider alternatives other than the "PG III" text on the POISON label, such as a special handling label or that "PG III" be allowed to be marked adjacent to the POISON label. After consideration of commenters' recommendations, RSPA is adopting the recommendation that a "PG III" marking be allowed to be displayed adjacent to the POISON label as suggested by these commenters. The segregation requirements of §§ 174.680(b), 176.600(c) and 177.841(e)(3) are revised to reflect this change.

In conclusion, RSPA is eliminating the KEEP AWAY FROM FOOD label, requiring the use of a POISON label on such packagings, and allowing "PG III" as optional text on the POISON label or as a marking adjacent to the label.

*Section 172.405.* Paragraph (f)(10) in 172.405 is revised to reflect that a label for a Division 6.1 Packing Group III

material may be modified to display the text "PG III" instead of "POISON" or "TOXIC," below the mid-line of the label. Alternatively, "PG III" may be marked adjacent to the label as authorized by § 172.313. (See also, §§ 174.680, 176.600 and 177.841.)

*Section 172.407.* The table in paragraph (b) is revised to add the lettering size requirements for SPONTANEOUSLY COMBUSTIBLE and DANGEROUS WHEN WET labels.

*Section 172.431.* This section is removed and reserved, thereby deleting the specifications for the KEEP AWAY FROM FOOD label.

*Section 172.504.* Consistent with the changes in §§ 172.400, 172.400a, 172.405 and 172.407, in the paragraph (e) Table 2, the entry for Division 6.1, Packing Group III is removed and the entry for Division 6.1, Packing Group I or II, other than Zone A or B inhalation hazard is revised. Paragraph (f)(10) is revised to reflect that a placard for Division 6.1, PG III material may be modified to display the text "PG III" below the mid-line of the placard or adjacent to the POISON label.

*Section 172.553.* This section is removed and reserved, in line with § 172.431, to delete the specifications for the KEEP AWAY FROM FOOD label.

#### Part 173

*Section 173.1.* For uniformity with other references in the HMR, the reference to the "Recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods" in paragraph (d) is revised to read "UN Recommendations."

*Section 173.2a.* As proposed in the NPRM, the § 173.2a, paragraph (b) Precedence of Hazard Table is revised to align it with the UN Recommendations' Precedence of Hazard Table. Consistent with the UN Recommendations, RSPA is revising two entries to provide for the Division 4.3, Packing Group II hazard and the Division 5.1, Packing Group II hazards to take precedence over the Class 8 Packing Group II hazard.

*Section 173.25.* In the NPRM, RSPA proposed to revise paragraph (b) to authorize shrink-wrapped or stretch-wrapped trays as outer packagings only if the inner packagings are not fragile, liable to break or be easily punctured (such as those made of glass, porcelain, stoneware or certain plastics). Several commenters stated that they supported the proposed change to eliminate the requirement that shrink-wrapped or stretch-wrapped trays conform to the PG III performance requirements. However, several commenters, including The Hazardous Materials Advisory Council (HMAC) and the National Paint and

Coatings Association (NPCA) expressed concern with the text "Inner packagings are not fragile, liable to break or be easily punctured" and stated that this text may need further clarification. The Chemical Specialties Manufacturers Association (CSMA) stated that the term "certain plastics" should be clarified to explain what is and is not acceptable. None of the commenters offered any suggested wording. RSPA notes that the proposed text is consistent with the text in the UN Recommendations and that to clarify what is meant by fragile packagings, including "certain plastics," the proposal identifies examples of such packagings (namely, "such as packagings made of glass, porcelain, stoneware or certain plastics."). RSPA also notes that the term "fragile" is used in § 178.601(g)(2)(i) and that its use there has not posed any significant difficulties in interpretation. RSPA also received a request to increase the 20 kg gross weight limitation. RSPA will consider refinements to this text to further clarify the meaning of fragile packaging and for increasing the 20 kg gross weight limitation on the basis of specific written proposals and may consider them for amendment of international and domestic regulations in a future rulemaking.

*Section 173.28.* In the NPRM, RSPA proposed to revise paragraph (c)(2) and add a new paragraph (c)(5) to authorize the reconditioning of packagings other than metal drums. RSPA received comments suggesting revisions to clarify the intent of the paragraph. The Association of Container Reconditioners (ACR) stated that the proposed changes to paragraph (c)(2) do not establish a clear and orderly definition for the reconditioning of non-bulk packages, other than steel drums. HMAC recommended clarification of the wording "all components." RSPA agrees with both commenters and is incorporating the recommended editorial changes into this final rule. This revision is consistent with amendments adopted in the tenth revised edition of the UN Recommendations.

*Section 173.29.* In § 173.29(b)(2)(iv)(B), the referenced absolute pressure "less than 276 kPa (40 psia); at 21° C (70° F)" is corrected to read "less than 280 kPa (40.6 psia); at 20° C (68° F)" for consistency with the absolute pressure reference in § 173.115(b).

*Section 173.32b.* In the NPRM, RSPA proposed to revise paragraph (b)(1) to allow for the internal inspection of IM portable tanks to be waived or substituted by other test methods if a leakproofness test is performed prior to

each filling. One commenter identified an analytical method which is used to determine leakage in Teflon PTFE-lined tanks and requested that it be authorized. RSPA is familiar with this method and has issued an exemption (DOT E-11827) to allow its use in place of performing the 2.5 year internal inspection. The procedure is very detailed and does not lend itself to incorporation into the regulations. To streamline the process of approving other acceptable methods, RSPA is providing an approval provision to allow other alternative procedures when approved by the Associate Administrator for Hazardous Materials Safety.

*Section 173.32c.* Paragraph (j) is revised for consistency with the UN Recommendations to allow IM portable tanks which are filled to less than 20% of their capacity, to be offered for transportation. Also, for consistency with the UN Recommendations, the provision excluding non-flowable solids is broadened to include viscous liquids with a low flow rate.

*Section 173.34.* RSPA is amending the table in paragraph (e) by adding a footnote to indicate that CTC specification cylinders are subject to the provisions in § 173.301(i).

*Section 173.35.* RSPA proposed in the NPRM to eliminate a provision prohibiting the reuse of fiberboard, wooden and some flexible intermediate bulk containers (IBCs) but to maintain a restriction against the reuse of multiwall paper flexible IBCs (13M1 and 13M2).

The Association of Container Reconditioners (ACR) in referring to paragraph (b)(2), stated that if the required markings are missing, it may not be possible for a reuser or reconditioner to be sure how to remark the IBC. RSPA maintains that it is the responsibility of the reuser or reconditioner to ensure that the IBC is marked correctly and if the required markings are no longer legible and cannot be established, the IBC no longer qualifies as a UN standard packaging.

Another commenter expressed concern about permitting the reuse of corrugated (fiberboard) IBCs with respect to the degradation of the fiberboard due to reuse. As set forth in paragraph (b), each IBC must be visually inspected to ensure it is free from corrosion, contamination, cracks or other damage which would render the IBC unsafe for transportation. If the IBC has damage which would render it unsafe for transportation, it is the shipper's obligation to not reuse the IBC.

Based on the foregoing, RSPA is adopting the changes as proposed. Also

see the preamble discussion in § 180.352 concerning IBCs.

**Section 173.56.** In paragraphs (b)(2)(i) and (b)(3)(i), the reference to a DOD incorporation by reference document is updated by removing an outdated edition date. A corresponding change with the updated edition date is made under § 171.7.

**Section 173.59.** Consistent with amendments adopted in the tenth revised edition of the UN Recommendations and consequential amendments to the HMT, the word "commercial" is deleted from the proper shipping names, "Charges, shaped, commercial, *without detonator*" appearing in this section.

**Section 173.121.** In the NPRM, RSPA proposed to revise paragraph (b) to align it with the UN Recommendations based on a decision taken by the UN Committee of Experts at its nineteenth session. Paragraph (b) provides an exception for viscous flammable liquids such as paints, enamels, varnishes, adhesives and polishes with a flash point of less than 23 °C to be classified as PG III materials, provided the material does not contain any substance with a primary or subsidiary risk of Division 6.1 or Class 8. In the ninth revised edition, the UN Committee of Experts included an exception which authorized mixtures containing not more than 5% of substances in Packing Group I or Packing Group II of Division 6.1 or Class 8, or not more than 5% of substances in Packing Group I of Class 3 requiring a Division 6.1 or Class 8 subsidiary label to be reclassified in PG III in the Recommendations. This exception was not adopted by ICAO or IMO based in part on proposals submitted by RSPA, and has since been removed from the UN Recommendations. Although the National Paint and Coatings Association (NPCA) supports the revision for viscous flammable liquids, NPCA expressed concern that the text is not consistent with international standards. Because the UN Recommendations removed the exception, the text proposed by RSPA and adopted in this final rule is consistent with the tenth revised edition of the UN Recommendations, the 1999–2000 ICAO Technical Instructions and Amendment 29 to the IMDG Code. As stated in the NPRM, RSPA believes the amendment enhances safety while simplifying the classification provisions in § 173.121.

**Section 173.159.** In § 173.159(g)(2), RSPA is authorizing additional packagings for electrolyte, acid or alkaline corrosive battery fluid included with storage batteries and filling kits. RSPA received a petition for rulemaking

(P–1313) which provided data supporting that the corrosive effect of battery fluid on steel is slight and that steel drums and steel boxes have a structural integrity that exceeds the presently authorized plywood and wooden boxes. RSPA agrees with the commenter and is revising paragraph (g)(2) to read "strong, rigid outer packagings" to authorize the use of steel drums and steel boxes. Also, this change eliminates the need for exemption, DOT E–10989.

A commenter requested that in paragraph (c)(6), the minimum Mullen test strength of corrugated slip covers be reduced from 200 pounds to 125 pounds. This request is beyond the scope of this final rule and may be considered in a rulemaking in the future.

Two commenters recommended that RSPA amend the HMR to provide additional information on the application of the entry, "Battery, wet, non-spillable," UN2800, to enhance consistency with the ICAO Technical Instructions and the IMDG Code. Although the requirements applicable for non-spillable batteries are currently fairly consistent with those in the ICAO Technical Instructions and the IMDG Code, RSPA agrees that additional harmonization could be achieved. Considering that the NPRM did not address requirements for non-spillable batteries, RSPA is not adopting the commenter's suggestion in this final rule. RSPA will take this issue into account and consider whether to propose incorporation of such changes into the HMR in a future NPRM, or develop proposals to the UN Committee of Experts, ICAO or IMO. Persons interested in proposing amendments to further harmonize the requirements for non-spillable batteries are encouraged to provide comments to RSPA with specific recommendations.

**Section 173.162.** In § 173.162, the packaging requirements for gallium are revised to offer shippers a wider selection of packaging alternatives while maintaining an adequate level of safety. The revision is consistent with the IMDG Code.

**Section 173.164.** In § 173.164, in paragraph (a), the limitation for quicksilver flasks of not more than 3.5 kg (7.7 pounds) capacity is replaced with 35 kg (77 pounds). This action corrects an editorial error and brings the quantity in line with ICAO. Paragraph (c) is also revised to correct an editorial error by removing the 100 mg. quantity limitation for mercury in manufactured articles or apparatuses.

**Section 173.166.** Section 173.166 is revised for consistency with the new

Division 2.2 entry, "Air bag inflators pyrotechnic or Air bag modules pyrotechnic or Seat-Belt pretensioners pyrotechnic." Paragraph (c) is also revised to clarify that the EX number or product code is required to appear on shipping papers only.

**Section 173.196.** In § 173.196, paragraph (a)(1)(iii) states that absorbent material must be placed between the primary receptacle and the secondary packaging. Consistent with a decision taken by the ICAO Dangerous Goods Panel, absorbent material is only necessary for liquid materials. On this basis, in § 173.196(a)(1)(iii), the words "When the primary receptacle contains liquids" are inserted in the first sentence before "An absorbent material".

**Section 173.220.** RSPA is amending § 173.220 to include requirements for both liquid and gas fueled vehicles consistent with amendments adopted by ICAO in Packing Instruction 900 and the four new shipping descriptions for incorporation in the HMT for internal combustion engines and vehicles. For editorial purposes and clarity, specific requirements in § 173.306(d) relevant to gas powered vehicles and hazardous components installed in vehicles are consolidated in this section. In addition, based on a comment received from the Air Transport Association, RSPA is allowing self-propelled vehicles operated by diesel fuel to be transported by aircraft without having to drain the tank. This amendment is consistent with the ICAO Technical Instructions.

**Section 173.221.** In response to two petitions for rulemaking (P–1344 and P–1353), RSPA is revising the packaging requirements for "Polymeric beads, *expandable, evolving flammable vapor*" and "Plastic molding compound *in dough, sheet or extruded rope form evolving flammable vapor*" while consolidating the non-bulk and bulk packaging requirements in § 173.221. The use of bulk packagings are authorized for "Plastic molding compound *in dough, sheet or extruded rope form evolving flammable vapor*."

RSPA received a comment to the NPRM from The Composites Fabricators Association requesting that paragraph (a) be revised to include steel racks, metal and plastic crates and shrink-wrap on pallets as non-bulk packaging authorizations for plastic molding compound in dough, sheet or extruded rope form, evolving flammable vapor, when transported on dedicated vehicles or freight containers. The commenter reasoned that the non-bulk authorizations should include packaging options similar to those proposed in the NPRM for bulk



packages in paragraph (b). The commenter states that the use of steel racks, metal or plastic crates, and shrink-wrap on pallets have been utilized safely for non-bulk and bulk packagings of plastic molding compound for decades and their exclusion from non-bulk authorization would place small producers of plastic molding compound at a disadvantage to larger producers. RSPA agrees and is revising this provision accordingly.

The commenter also requested that the italicized descriptions from the HMT, (i.e., "evolving flammable vapor" and "in dough, sheet or extruded rope form evolving flammable vapor" for plastic molding compound) be added to the proper shipping names in paragraphs (a) and (b). The commenter stated that omitting the italicized description may result in confusion among manufacturers of plastic molding compounds that do not evolve flammable vapor. RSPA agrees with the commenter and is revising paragraphs (a) and (b) to reflect the clarification.

**Section 173.222.** RSPA is removing the current provisions appearing in § 173.222 pertaining to wheelchairs transported in commerce. The removal of these provisions is consistent with the amendment removing the entry for "Wheel chair, electric" in the HMT. As stated earlier in the preamble discussion to the HMT, an italicized entry is added to refer users of the HMR to "Battery-powered vehicle or Battery-powered equipment," UN3171. "Battery-powered vehicle" and "Battery-powered equipment" are the proper shipping names used in the ICAO Technical Instructions, IMDG Code and UN Recommendations for wheel chair, electric. Section 173.222 will contain requirements applicable to the new entry, "Dangerous goods in machinery or Dangerous Goods in Apparatus." These requirements are consistent with those currently in the ICAO Technical Instructions. (Also see preamble discussion under the HMT.)

**Section 173.224.** RSPA is adding the word "product" before the word "evaluation" in paragraph (c)(3). This change clarifies that the exception for samples applies for purposes of shipping products for evaluation and not only for hazard classification purposes.

**Section 173.225.** In paragraph (b), a new organic peroxide formulation is added to the Organic Peroxides table consistent with the tenth revised edition of the UN Recommendations. Various entries are corrected due to typographical errors. In addition, in line with the revision in § 173.224(c)(3), the word "product" is inserted before the

word "evaluation" in paragraph (c)(2). In addition, various changes are made to correct printing errors.

**Section 173.243.** RSPA is adding a new paragraph (e)(3) to authorize a material with a Class 8 subsidiary hazard, PG III to be packaged in accordance with § 173.242. In the IMDG Code, certain dual hazard materials with a subsidiary hazard of Class 8, PG III are permitted in IBCs, consistent with those specified in § 173.242. Section 173.242(e) authorizes certain dual hazard materials with subsidiary risks of Class 3, with a flash point greater than 38° C, and Division 6.1, PG III to be packaged in intermediate bulk containers specified in § 173.242. However, this exception is not applied to dual hazard materials with subsidiary hazards of Class 8, PG III. RSPA has issued a number of competent authority approvals consistent with the intermediate bulk container assignments for these materials in the IMDG Code, and on this basis, is incorporating this allowance into the HMR.

**Section 173.301.** RSPA is revising paragraph (i) to clarify that non-DOT specification cylinders which are being imported into or exported from the U.S. or passing through the U.S., in the course of being shipped between places outside the U.S., may be offered and accepted for transportation and transported by motor vehicle within a single port area (including contiguous harbors) when packaged, marked, classed, labeled, stowed and segregated in accordance with the IMDG Code. This exception was not readily apparent in § 173.301(i) which resulted in numerous inquiries by users of the HMR.

This section also is revised to allow use of Canadian Transport Commission (CTC) specification cylinders for transportation to, from and within the U.S. In the NPRM, based in part on a petition for rulemaking submitted by the Compressed Gas Association, Inc. (CGA, P-1321), RSPA proposed to authorize use of certain Canadian cylinders manufactured in conformance with the Canadian Transport of Dangerous Goods (TDG) Regulations and marked "TDG" or "CTC." The NPRM proposed four conditions for use of these cylinders including a requirement that the cylinder be marked "DOT/" immediately before the Canadian specification marking (such as, "DOT/CTC"). Comments supported the proposal authorizing Canadian cylinders to be filled and transported to, from and within the U.S. However, several commenters, including CGA and the National Welding Supply Association, Inc. (NWSA) and Transport

Canada were opposed to marking Canadian specification cylinders at the time of requalification with a "DOT" marking preceding the Canadian marking already on the cylinder. They stated that a cylinder in full conformance with the TDG Regulations should not be required to be marked "DOT" and they requested that RSPA allow the cylinders to be transported in commerce in the U.S. without any additional marking.

Transport Canada stated that "Canadian cylinders, like DOT cylinders, are manufactured worldwide under controlled certification, third party approval and retest procedures consistent with RSPA's third party approval and retest procedures." They also pointed out that cylinders manufactured and approved according to the TDG Regulations are currently marked "TC" and that there are no Canadian cylinders marked "TDG." Earlier Canadian manufactured cylinders have the markings "CTC", "CRC" and "BTC." They requested that RSPA consider authorizing use of all TC specification packagings, including those corresponding to DOT or MC specification markings.

One commenter stated that because the authorization to use Canadian cylinders is included in § 171.12a, as opposed to Part 173 of the HMR, the provision falls short of full acceptance of cylinders approved by Transport Canada. The commenter stated that the proposed provision would not permit the transport of Canadian cylinders from one point in the U.S. to another, or transport from the U.S. into Canada.

On the basis of the comments, RSPA is adopting the proposed provisions with several modifications. RSPA is adding the authorization to use CTC cylinders in § 173.301, instead of § 171.12a. The authorization will allow cylinders marked "CTC" and conforming to TDG Regulations to be transported to, from and within the U.S. Section 171.2(d)(1) is amended by adding the letters "CTC" to the list of specification indications that may not be misrepresented according to § 171.2(c). Section 173.34(e) is amended to include the retest periods for CTC specification cylinders and to allow these foreign cylinders to be excepted from § 173.301(j) when they conform to certain conditions. RSPA is not including the requirement to mark Canadian specification cylinders at the time of requalification with a "DOT" marking preceding the Canadian marking already on the cylinder. To allow time for trade associations to inform retesters and fillers about the decisions taken in this rule, RSPA is not



authorizing immediate voluntary compliance; that is, upon publication of this final rule, with the new requirements in § 173.301(i)(2) for CTC specification cylinders. RSPA is authorizing use of the new requirements applicable to CTC specification cylinders consistent with the effective date of the final rule (October 1, 1999).

RSPA is not authorizing use of CRC and BTC cylinders in § 173.301(i). RSPA believes that there is not an overwhelming number of cylinders bearing the "CRC" or "BTC" marks available for transport into the U.S. to justify addressing them in § 173.301(i). These cylinders were manufactured prior to 1973 and many are no longer in service. RSPA is concerned that recognizing these additional marks would unnecessarily complicate the cylinder specification marking system used in the U.S. In addition, RSPA is not authorizing the use of TC specification cylinders in this final rule because they are marked with the service pressure in metric units according to the Canadian TDG Regulations. RSPA is concerned that the metric marking on these cylinders would be confusing for U.S. retesters and refillers. RSPA proposed the adoption of four new metric-marked DOT cylinder specifications in a proposed rule (HM-220; 63 FR 58469) published October 30, 1998. RSPA may consider authorizing the use of TC cylinders once certain issues are addressed, such as the training and education for retesters and fillers, and the differences in marking requirements for TC cylinders and those for the proposed new DOT specification cylinders. The decisions taken in this rule are not intended to and do not impact the continued acceptance of Canadian or U.S. cylinders which are dual marked "CTC" and "DOT" to indicate that they conform to the requirements of the TDG Regulations and the HMR.

**Section 173.306.** RSPA received several comments pertaining to the NPRM's proposal to include an exception in § 173.306(f) for accumulators intended to function as shock absorbers, struts, gas springs, pneumatic springs or other energy absorbing devices. In the NPRM, RSPA proposed to except the accumulators from the requirements of the HMR, if they meet certain conditions. The majority of commenters supported the exception and complimented RSPA for harmonizing the HMR with the UN Recommendations. The American Automobile Manufacturers Association (AAMA) stated that efficiencies and cost savings will be realized by adopting the

exception. One commenter suggested a change to the exception, as proposed in the NPRM, by requesting that the minimum burst pressure for pressurized accumulators be changed to three times the charge pressure. The commenter provided no technical details or safety justification for the alternative requirement, other than to claim that an industry standard specifies a safety factor of two times the charge pressure. The commenter also stated that the proposed exception will not effect the exemption, DOT E 8786. RSPA points out that the exemption does not authorize a minimum burst pressure of three times the charge pressure. On the contrary, the exemption specifies burst pressures consistent with those proposed in the NPRM.

Based on the foregoing, RSPA is adopting, as proposed, the new accumulator exception by adding a new paragraph (f)(4). This amendment is consistent with Special Provision 283 in the tenth revised edition of the UN Recommendations, as modified in a petition from the AAMA, (P-1335). RSPA also is adopting, as proposed, an approval provision to allow accumulators not conforming to the provisions of the new exception parameters to be considered by RSPA under its approvals program. In addition, the provisions in paragraphs (d)(1), (d)(2), (d)(3) and (d)(4) are relocated to the revised § 173.220 and the subparagraphs are removed.

#### Part 174

**Section 174.81.** The paragraph (f) Compatibility Table for Class 1 (Explosive) Materials is revised to allow Compatibility Group G to be loaded and transported with Compatibility Groups C, D and E under certain conditions. This allowance is consistent with the § 176.144(a) Table for Authorized Mixed Stowage for Explosives aboard vessels and with the IMDG Code. RSPA is revising the § 177.848 Compatibility Table to reflect the same allowance.

**Section 174.680.** Paragraph (b) is revised to authorize separation in the same car, rather than segregation in different cars, of Division 6.1, Packing Group III materials from foodstuffs. The reference to the KEEP AWAY FROM FOOD label is removed and replaced by a reference to a modified POISON label displaying "PG III" text, or a "PG III" marking placed immediately adjacent to the POISON label.

#### Part 175

**Section 175.630.** Paragraph (a) is amended by removing the reference to the KEEP AWAY FROM FOOD label.

#### Part 176

**Section 176.76.** A new paragraph (i) is added, consistent with Amendment 29 of the IMDG Code, to require flammable gases or liquids having a flashpoint of 23° C or less to be stowed away from possible sources of ignition.

**Section 176.83.** Paragraphs (a)(1), (a)(3), (a)(8) are revised and a new paragraph (a)(10) is added to clarify segregation requirements aboard vessels. In addition, in the § 176.83(g) Segregation Table for the segregation requirement "Away From," "No restriction" for "Open versus open—On deck" is revised to read "At least 3 meters." These changes are consistent with Amendment 29 of the IMDG Code.

**Section 176.600.** This section is revised to specify that packages containing a Division 6.1, Packing Group III material and bearing a modified POISON label displaying the text "PG III," or a "PG III" marking adjacent to the POISON label, must be stowed away from living quarters, ventilation ducts serving living quarters and separated from foodstuffs. This stowage requirement does not apply when hazardous materials and foodstuffs are stowed in different closed transport units.

#### Part 177

**Section 177.841.** Paragraph (e)(3) is revised to specify requirements for separating Division 6.1, PG III materials from foodstuffs, consistent with provisions in § 177.848. However, a package containing a Division 6.1, PG III material and bearing either a primary or subsidiary POISON hazard warning label with text displaying "PG III," or an adjacent "PG III" marking, may be transported on the same vehicle as foodstuffs if separated to prevent commingling.

**Section 177.848.** In paragraph (f), the Compatibility Table for Class 1 (Explosive) Materials is revised to allow Compatibility Group C to be loaded and transported on the same vehicle with Compatibility Groups C, D and E under certain conditions. This allowance is consistent with the wording in the § 176.144(a) Table for Authorized Mixed Stowage for Explosives aboard vessels and in the IMDG Code. RSPA is also revising the § 174.81 Compatibility Table to reflect the same allowance.

#### Part 178

**Section 178.270-3.** In paragraph (e), a reference to ISO 82-1974(E) Steels-Tensile Testing is revised to correct a printing error.

**Section 178.509.** As proposed in the NPRM, paragraph (b) is amended to

authorize the use of recycled plastic materials of known origin and characteristics for the manufacture of UN specification plastic drums and jerricans, when approved by the Associate Administrator for Hazardous Materials Safety. The Association of Container Reconditioners (ACR) expressed their support of the general goal of encouraging greater reuse of recycled plastic in new drums. However, ACR believes the proposal, as presented, is inadequate and that RSPA is ignoring action taken by the UN Committee of Experts, creating a significant burden on the approvals process, and possibly creating supply and demand imbalances. RSPA believes that at the present time, the use of recycled plastics should only be allowed under an approval process. RSPA believes additional experience data is needed to support introduction of specific provisions for its use into the HMR.

Also, due to a typographical error in paragraph (b) in the NPRM, the word "when" is corrected to read "unless."

**Section 178.703.** Under Docket HM-215B (62 FR 24743), RSPA added a requirement to § 178.703(b)(6)(ii) which stated, "Where the outer casing of a composite intermediate bulk container can be dismantled, each of the detachable parts must be marked with the month and year of manufacture and name or symbol of the manufacturer." This addition was adopted consistent with changes in the UN Recommendations and was reconsidered by the UN Sub-committee of Experts at its fifteenth session because IBC manufacturers asked for clarification of the term "detachable parts." The Sub-committee adopted revised text to identify this requirement as applying only to parts intended to be detached for dismantling. RSPA is incorporating this text into the HMR in response to concerns raised by industry regarding the costs associated with applying the existing HMR marking requirements.

**Section 178.813.** RSPA is revising paragraph (b) to provide for the inner receptacle of a composite IBC to be tested without the outer packaging, provided the test results are not affected. This provision was inadvertently omitted in previous efforts to harmonize the HMR with the UN Recommendations.

**Section 180.352.** In the NPRM, in paragraph (b), RSPA proposed to relocate to § 173.35, a requirement that a person must perform a visual inspection prior to filling an IBC. The periodic leakproofness test and visual inspection requirements were proposed

to be retained in paragraphs (b)(1) and (b)(2). In paragraph (b)(3), consistent with the changes in § 173.35, RSPA proposed to allow the reuse of rigid plastic and composite IBCs, to require that they must also be internally inspected at least every five years. This is consistent with paragraph 6.5.1.6.4 of the UN Recommendations.

RSPA proposed to add a new paragraph (c) to provide for the repair, testing and inspection of IBCs which are repaired after being damaged (for example, due to an impact, such as an accident). This provision was inadvertently omitted in Docket HM-215B [62 FR 24690] and is consistent with the UN Recommendations.

Two commenters supported the proposal, but were concerned that IBCs may be reused when they are not fully capable of withstanding transportation rigors. The commenters requested RSPA to establish specific inspection criteria. In response to these comments, RSPA points out that inspection criteria were proposed in the NPRM and are adopted in this final rule. However, if industry develops consensus standards with more detailed and specific inspection criteria for determining the adequacy of various types of IBCs for reuse, RSPA will consider incorporating such standards in the HMR in a future rulemaking.

ACR also recommended that RSPA revise the definition of IBC design type to permit replacement of inner receptacles of composite IBCs with receptacles manufactured by companies other than the original manufacturer, as well as replacement of service and structural equipment. This is beyond the scope of this final rule and should be proposed to RSPA in a petition for rulemaking. However, as stated in current § 178.801(c)(7)(iv), a packaging that differs in service equipment is not considered to be a new design type.

The Rigid Intermediate Bulk Container Association (RIBCA) recommended that RSPA include provisions for the maintenance of serviceable IBCs, as well as the repair of damaged IBCs. This issue also is beyond the scope of this final rule and may be addressed in a separate rulemaking.

Based on the foregoing, RSPA is adopting the changes as proposed. (Also see preamble discussion under § 173.35.)

## V. Rulemaking Analyses and Notices

### A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This final rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866

and, therefore, was not reviewed by the Office of Management and Budget. The rule is not considered a significant rule under the Regulatory Policies and Procedures of the Department of Transportation [44 FR 11034].

### B. Executive Order 12612

This final rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 ("Federalism"). Federal hazardous materials transportation law, 49 U.S.C. 5701-5127, contains an express preemption provision (49 U.S.C. 5125(b)) that preempts State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

- (i) The designation, description, and classification of hazardous material;
- (ii) The packing, repacking, handling, labeling, marking, and placarding of hazardous material;
- (iii) The preparation, execution, and use of shipping documents related to hazardous material and requirements related to the number, contents, and placement of those documents;
- (iv) The written notification, recording, and reporting of the unintentional release in transportation of hazardous material; or
- (v) The design, manufacturing, fabricating, marking, maintenance, reconditioning, repairing, or testing of a packaging or container represented, marked, certified, or sold as qualified for use in transporting hazardous material.

This final rule addresses covered subjects under items i, ii, iii and v above and, adopted as final, would preempt State, local, or Indian tribe requirements not meeting the "substantively the same" standard. Federal hazardous materials transportation law provides at § 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. RSPA has determined that the effective date of Federal preemption for these requirements will be 180 days after the effective date of a final rule under this docket. Thus, RSPA lacks discretion in this area, and preparation of a federalism assessment is not warranted.

### C. Regulatory Flexibility Act

This final rule incorporates changes introduced in the tenth revised edition of the UN Recommendations, the 1997-98 ICAO Technical Instructions, and Amendment 29 to the IMDG Code. (The

ICAO Technical Instructions and the IMDG Code were updated in a final rule, published October 29, 1998 [Docket HM-215C; 63 FR 44312].) It applies to offerors and carriers of hazardous materials and will facilitate the transportation of hazardous materials in international commerce by providing consistency with international requirements. U.S. companies, including numerous small entities competing in foreign markets, will be forced to comply with a dual system of regulation, to their economic disadvantage, if the changes in this final rule are not adopted. The changes are intended to avoid this result. The costs associated with this final rule are considered to be so minimal as to not warrant preparation of a regulatory impact analysis or regulatory evaluation. In contrast, the majority of amendments should result in cost savings. No cost increases are associated with the incorporation of an exception for certain shock absorbers, struts, gas springs and shocks, and other automobile energy absorbing articles in § 173.306(f). This amendment should result in an increased cost savings for the automotive industry. Although the labeling requirements for poisonous materials in this final rule may affect some small business entities that ship or transport hazardous materials, any adverse economic impact should be offset through a lengthy transition period, retention of current operational requirements, and modification of the POISON or TOXIC label. The amendments for IBCs would remove prohibitions for reusing certain IBCs which would result in costing savings for industry by allowing IBCs to be inspected and reused, instead of used and discarded. In addition, the amendments to the IBC marking requirements in § 178.703 will eliminate the burden of unnecessary markings which will also result in cost savings.

A number of amendments in this final rule will result in relaxation of overly burdensome requirements which will result in cost savings. For example, the removal of the requirement to performance test shrink or stretch-wrapped trays containing limited quantities of hazardous materials should result in a cost savings for many companies. The authorization to allow use of recycled plastic materials when approved by the Associate Administrator for Hazardous Materials Safety, the relaxation of filling requirements for IM portable tanks, the authorization to use steel packages for batteries and the amendments for packaging gallium, mercury, polymeric beads and plastic molding compound

are other examples where cost savings will be realized. Many companies involved in domestic, as well as global operations, will realize economic benefits as a result of the amendments. Therefore, I certify that this final rule will not, if promulgated, have a significant economic impact on a substantial number of small entities.

#### *D. Paperwork Reduction Act*

The requirements for information collection have been approved by the Office of Management and Budget (OMB) under OMB control numbers 2137-0034 for shipping papers and 2137-0557 for approvals. Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it displays a valid OMB control number.

#### *E. 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 number contained in the heading of this document can be used to cross-reference this action with the Unified Agenda.

#### *F. Unfunded Mandates Reform Act*

This final rule does not impose unfunded mandates under the Unfunded Mandates Reform Act of 1995. It does not result in costs of \$100 million or more to either State, local or tribal governments, in the aggregate, or to the private sector, and is the least burdensome alternative that achieves the objective of the rule.

#### **List of Subjects**

##### *49 CFR Part 171*

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

##### *49 CFR Part 172*

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

##### *49 CFR Part 173*

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

##### *49 CFR Part 174*

Hazardous materials transportation, Radioactive materials, Railroad safety.

##### *49 CFR Part 175*

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

##### *49 CFR Part 176*

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

##### *49 CFR Part 177*

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

##### *49 CFR Part 178*

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

##### *49 CFR Part 180*

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

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

#### **PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS**

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

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

##### **§ 171.2 [Amended]**

2. In § 171.2, in paragraph (d)(1), the wording “‘MC,’ or ‘UN’;” is removed and “‘CTC,’ ‘MC,’ or ‘UN’;” is added in its place.

##### **§ 171.7 [Amended]**

3. In the § 171.7(a)(3) Table, the following changes are made:

a. Under “American Pyrotechnics Association”, for the entry “APA Standard 87–1, Standard for Construction and Approval for Transportation of Fireworks and Novelties”, the wording “Fireworks and Novelties” is revised to read “Fireworks, Novelties, and Theatrical Pyrotechnics” and the wording “April 1993 Edition” is revised to read “January 23, 1998 version”.

b. Under “American Society for Testing and Materials”, for the entry “ASTM D 56–93 Standard Test Method for Flash Point by Tag Closed Tester”, the wording “ASTM 56–93” is revised to read “ASTM D 56–97a”.

c. Under "American Society for Testing and Materials", for the entry "ASTM 93-94 Standard Test Methods for Flash Point by Pensky-Martens Closed Tester", the wording "Closed Tester" is revised to read "Closed Cup Tester" and the wording "ASTM 93-94" is revised to read "ASTM D 93-97".

d. Under "American Society for Testing Materials", for the entry "ASTM D 3278-95 Standard Test Methods for Flash Point of Liquids by Setaflash Closed-Cup Apparatus," the word "Setaflash" is revised to read "Small Scale" and the wording "ASTM D 3278-95" is revised to read "ASTM D 3278-96".

e. Under "American Society for Testing Materials", for the entry "ASTM D 3828-93 Standard Test Methods for Flash Point by Small Scale Closed Tester", the wording "ASTM D 3828-93" is revised to read "ASTM D 3828-97".

f. Under "Department of Defense (DOD)," for the entry "DOD TB 700-2; NAVSEAINST 8020.8; AFTO 11A-1-47; DLAR 8220.1: Explosives Hazard Classification Procedure, December 1989", the number A8020.8" is revised to read 8020.8B" and the wording "Procedure, December 1989" is revised to read "Procedures, January 1998".

g. Under "International Organization for Standardization", a new entry "ISO 8115 Cotton bales—Dimensions and density, 1986 Edition" is added in alpha-numeric order in the first column and the reference "172.102" is added in the second column.

h. Under "United Nations", for the entry "UN Recommendations on the Transport of Dangerous Goods, Ninth Revised Edition (1995)", the wording "Ninth Revised Edition (1995)" is revised to read "Tenth Revised Edition (1997)" and in the second column, the reference A172.519;" is removed.

i. Under "United Nations", for the entry "UN Recommendations on the Transport of Dangerous Goods, Manual of Tests and Criteria", in the second column, the reference "172.102," is added immediately before "173.21".

4. In § 171.8, the following definitions are revised to read as follows:

**§ 171.8 Definitions and abbreviations.**

\* \* \* \* \*

*N.O.S.* means not otherwise specified.

*N.O.S. description* means a shipping description from the § 172.101 table which includes the abbreviation *n.o.s.*

\* \* \* \* \*

**§ 171.11 [Amended]**

5. In § 171.11, in paragraph (d)(14), the wording "An aerosol" is removed and "Except as provided for limited

quantities of compressed gases in containers of not more than 4 fluid ounces capacity under § 173.306(a)(1) of this subchapter, aerosols" is added in its place.

**§ 171.12 [Amended]**

6. In § 171.12, in paragraph (b)(17), the wording "An aerosol" is removed and "Except as provided for limited quantities of compressed gases in containers of not more than 4 fluid ounces capacity under § 173.306(a)(1) of this subchapter, aerosols" is added in its place.

**§ 171.12a [Amended]**

7. In § 171.12a, in paragraph (b)(16), the wording "An aerosol" is removed and "Except as provided for limited quantities of compressed gases in containers of not more than 4 fluid ounces capacity under § 173.306(a)(1) of this subchapter, aerosols" is added in its place.

8. In § 171.14, paragraph (d) introductory text and paragraph (d)(1) are revised and paragraph (d)(3) is added to read as follows:

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

\* \* \* \* \*

(d) A final rule published in the **Federal Register** on March 5, 1999, effective October 1, 1999, resulted in revisions to this subchapter. During the transition period provided in paragraph (d)(1) of this section, a person may elect to comply with either the applicable requirements of this subchapter in effect on September 30, 1999, or the requirements of this subchapter in the March 5, 1999 final rule, in effect on October 1, 1999.

(1) *Transition dates.* The effective date of the March 5, 1999 final rule is October 1, 1999. A delayed compliance date of October 1, 2000 is authorized. On October 1, 2000, all applicable regulatory requirements adopted in the March 5, 1999 final rule in effect on October 1, 1999 must be met.

\* \* \* \* \*

(3) Until October 1, 2003, the KEEP AWAY FROM FOOD labeling and placarding requirements in effect on September 30, 1999, may continue to be used in place of the new requirements for Division 6.1, Packing Group III materials.

\* \* \* \* \*

**§ 171.14 [Amended]**

9. In addition, in § 171.14, the following changes are made:

a. In the table in paragraph (b), in Column 1, the entry "Division 6.1, PG I and II (other than Zone A or B

inhalation hazard)" is revised to read "Division 6.1, PG I (other than Zone A or B inhalation hazard), PG II, or PG III".

b. In the table in paragraph (b), the entry "Division 6.1, PG III" is removed.

c. In paragraph (d)(2), in the first sentence, the wording "in effect on September 30, 1997, or new requirements of this subchapter in the May 6, 1997 rule, in effect on October 1, 1997," is removed and "in effect on September 30, 1999, or new requirements of this subchapter in the March 5, 1999 final rule, in effect on October 1, 1999," is added in its place.

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

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

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

11. In § 172.101, paragraph (b) introductory text is revised, paragraphs (b)(4) and (b)(5) are redesignated as paragraphs (b)(5) and (b)(6) respectively, and a new paragraph (b)(4) is added to read as follows:

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

\* \* \* \* \*

(b) *Column 1: Symbols.* Column 1 of the Table contains six symbols ("+", "A", "D", "G", "T" and "W") as follows:

\* \* \* \* \*

(4) The letter "G" identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description. (See § 172.203(k).)

\* \* \* \* \*

**§ 172.101 [Amended]**

12. In addition, in § 172.101, in paragraph (g), in the Label Substitution Table, the following changes are made:

a. In Column 1, the language "6.1 (I or II, other than Zone A or B inhalation hazard)" is revised to read "6.1 (other than inhalation hazard, Zone A or B)".

b. The entry "6.1 (III)?" is removed.

13. In § 172.101, the Hazardous Materials Table is amended by removing, adding, or revising, in appropriate alphabetical sequence, the following entries to read as follows:

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

\* \* \* \* \*





§ 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	(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
	Elevated temperature liquid, n.o.s., at or above 100 C and below its flash point (UN3257).	*		*	*	*	*		*			
	Engines, internal combustion, including when fitted in machinery or vehicles.	*		*	*	*	*		*			
	Ethyl cyanoacetate.	*		*	*	*	*		*			
	Hexafluoropropylene oxide.	*		*	*	*	*		*			
	Hydrocarbon gases, compressed, n.o.s.	*		*	*	*	*		*			
	Hydrocarbon gases, liquefied, n.o.s.	*		*	*	*	*		*			
	Metal alkyl halides, n.o.s. or Metal aryl halides, n.o.s.	*		*	*	*	*		*			
	Metal alkyl hydrides, n.o.s. or Metal aryl hydrides, n.o.s.	*		*	*	*	*		*			
	Metal alkyls, n.o.s. or Metal aryls, n.o.s.	*		*	*	*	*		*			
	Nitrogen trifluoride, compressed (Class 2.3).	*		*	*	*	*		*			



Nitroglycerin mixture with more than 2 percent but not more than 10 percent nitroglycerin, by mass, desensitized.	*	*	*	*	*	*
2,5-Norbornadiene or Bicyclo [2,2,1]hepta-2,5-diene, inhibited.	*	*	*	*	*	*
Octyl aldehydes, flammable.	*	*	*	*	*	*
Phenoxy pesticides, liquid, flammable, toxic, flash point less than 23 degrees C. (PG I, II).	*	*	*	*	*	*
Phenoxy pesticides, liquid toxic (PG I, II, III).	*	*	*	*	*	*
Phenoxy pesticides, liquid, toxic, flammable, flash point not less than 23 degrees C. (PG I, II, III).	*	*	*	*	*	*
Phenoxy pesticides, solid, toxic (PG I, II, III).	*	*	*	*	*	*
Phenyl urea pesticides, liquid, flammable, toxic, flash point less than 23 degrees C. (PG I, II).	*	*	*	*	*	*
Phenyl urea pesticides, liquid, toxic, flammable flash point not less than 23 degrees C. (PG I, II, III).	*	*	*	*	*	*

§ 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	(8) Packaging (§ 173. * * *)		(9) Quantity limitations		(10) Vessel stowage		
							Exceptions	Non-bulk	Bulk	Passenger aircraft/rail	Cargo aircraft only	Location	Other
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	Phenyl urea pesticides, solid, toxic (PG I, II, III).	*		*	*		*		*	*			
	Phthalimide derivative pesticides, liquid, flammable, toxic, flash point less than 23 degrees C. (PG I, II).												
	Phthalimide derivative pesticides, liquid, toxic (PG I, II, II).												
	Phthalimide derivative pesticides, liquid, toxic, flammable, flashpoint not less than 23 degrees C. (PG I, II, III).												
	Phthalimide derivative pesticides, solid, toxic (PG I, II, II).												
A W	Polychlorinated biphenyls.	*		*	*		*		*	*			
	Pyrophoric organometallic compound, n.o.s.	*		*	*		*		*	*			
D	Vehicles, self-propelled including internal combustion engines or other apparatus containing an internal combustion engine or electric storage battery, see Engines etc. or Battery powered etc. or Wheel chair, electric).	*		*	*		*		*	*			



§ 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	(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
	Bicyclo [2,2,1] hepta-2,5-diene, inhibited or 2,5-Norbornadiene, inhibited.	3	UN2251	II	3	*	150	202	242	5 L	60 L	D	
	Bromopropanes	3	UN2344	III	3	T2	150	203	242	60 L	220 L	A	
	Charges, shaped, without detonator.	1.1D	UN0059	II	1.1D	*	None	62	None	Forbidden	Forbidden	B.	
	Charges, shaped, without detonator.	1.2D	UN0439	II	1.2D	*	None	62	None	Forbidden	Forbidden	B.	
	Charges, shaped, without detonator.	1.4D	UN0440	II	1.4D	*	None	62	None	Forbidden	75	A	24E
	Charges, shaped, without detonator.	1.4S	UN0441	II	1.4S	*	None	62	None	25 kg	100 kg	A	
D	Dangerous Goods in Machinery or Dangerous Goods in Apparatus.		NA8001			136	None	222	None	No limit	No limit	A	
G	Dyes, solid, corrosive, n.o.s. or Dye intermediates, solid, corrosive, n.o.s.	8	UN3147	1	8	*	None	211	242	1 kg	25 kg	A	
	Elevated temperature liquid, n.o.s., at or above 100 C and below its flash point (including molten metals, molten salts, ect.).	9	UN3257	III	9	T1	None	None	247	Forbidden	Forbidden	A	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	(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
	Mercaptans, liquid, flammable, n.o.s. or Mercaptan mixture, liquid, flammable, n.o.s..	3	UN3336	I	3	T23	150	201	243	1 L	30 L	E	95
				II	3	T8, T31	150	202	242	5 L	60 L	B	95
				III	3	B1, B52, T7, T30	150	203	241	60 L	220 L	B	95
	Metal alkyl halides, water-reactive, n.o.s. or Metal aryl halides, water-reactive, n.o.s..	4.2	UN3049	I	4.2, 4.3	B9, B11, T28, T29, T40.	None	181	244	Forbidden	Forbidden	D	
	Metal alkyl hydrides, water-reactive, n.o.s. or Metal aryl hydrides, water-reactive, n.o.s..	4.2	UN3050	I	4.2, 4.3	B9, B11, T28, T29, T40.	None	181	244	Forbidden	Forbidden	D	
	Metal alkyls, water-reactive, n.o.s. or Metal aryls, water-reactive n.o.s..	4.2	UN2003	I	4.2, 4.3	B11, T42	None	181	244	Forbidden	Forbidden	D	
	Nitroglycerin mixture, desensitized, liquid, flammable, n.o.s. with not more than 30 percent nitroglycerin, by mass..	3	UN3343	*	3	129	None	214	None	Forbidden	Forbidden	D	
	Nitroglycerin mixture, desensitized, solid, n.o.s. with more than 2 percent but not more than 10 percent nitroglycerin, by mass..	4.1	UN3319	II	4.1	118	None	None	None	Forbidden	0.5 kg	E	
	Octyl aldehydes	3	UN1191	III	3	B1, T1	150	203	242	60 L	220 L	A	

	4.1	*	UN3344	II	*	4.1	*	118	*	None	*	214	None	*	Forbidden	Forbidden	E	40
Pentaerythritetetrinitrate mixture, desensitized, solid, n.o.s. with more than 10 percent but not more than 20 percent PETN, by mass.	4.1	*	UN3344	II	*	4.1	*	118	*	None	*	214	None	*	Forbidden	Forbidden	E	40
Pentanol	3	*	UN1105	II	*	3	*	T1	*	150	*	202	242	*	5 L	60 L	B	40
				III		3		B1, B3, T1		150		203	242		60 L	220 L	A	
Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic flashpoint less than 23°C.	3	*	UN3346	I	*	3, 6.1	*	T23	*	None	*	201	243	*	Forbidden	30 L	B	40
Phenoxyacetic acid derivative pesticide, liquid, toxic.	6.1		UN3348	II		3, 6.1		T14		None		202	243		1 L	60 L	B	40
				I		6.1		T24, T26		None		201	243		1 L	30 L	B	40
Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable, flashpoint not less than 23°C.	6.1		UN3347	II		6.1		T14		153		202	243		5 L	60 L	B	40
				III		6.1		T14		153		203	241		60 L	220 L	A	40
				I		6.1, 3		T24, T26		None		201	243		1 L	30 L	B	40
Phenoxyacetic acid derivative pesticide, solid, toxic.	6.1		UN3345	II		6.1, 3		T14		153		202	243		5 L	60 L	B	40
				III		6.1, 3		T14		153		203	241		60 L	220 L	A	40
				I		6.1				None		211	242		5 kg	50 kg	A	40
A, W	9	*	UN2315	II	*	9	*	9, 81	*	155	*	202	241	*	100 L	220 L	A	34
				III		6.1				153		212	242		25 kg	100 kg	A	40
				I		6.1				153		213	240		100 kg	200 kg	A	40
A, W	9	*	UN2315	II	*	9	*	9, 81	*	155	*	212	240	*	100 kg	200 kg	A	34
				I		3, 6.1		T24, T26		None		201	243		Forbidden	30 L	B	40
Pyrethroid pesticide, liquid, flammable, toxic, flashpoint less than 23°C.	6.1		UN3352	II		3, 6.1		T14		None		202	243		1 L	60 L	B	40
				I		6.1				None		211	242		1 L	30 L	A	40
Pyrethroid pesticide, liquid toxic.	6.1		UN3352	II		6.1				153		212	242		5 L	60 L	A	40
				III		6.1				153		213	240		60 L	220 L	A	40



§ 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	(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
	Pyrethroid pesticide, liquid, flammable, toxic, flashpoint not less than 23 °C.	6.1	UN3351	I	6.1, 3	T24, T26	None	201	243	1 L	30 L	B	40
	Pyrethroid pesticide, solid, toxic.	6.1	UN3349	I	6.1, 3	T14	153	202	243	5 L	60 L	B	40
					6.1, 3	T14	153	203	241	60 L	220 L	B	40
					6.1		None	211	242	5 kg	50 kg	A	40
					6.1		153	212	242	25 kg	100 kg	A	40
					6.1		153	213	230	100 kg	200 kg	A	40
					*	*	*	*	*	Forbidden	Forbidden	D	
G	Pyrophoric organometallic compound, water-reactive, n.o.s.	4.2	UN3203	I	4.2, 4.3	T28, T40	None	187	242	Forbidden	Forbidden	D	
	Refrigerant gas R 404A	2.2	UN3337	*	2.2		306	304	314, 315	75 kg	150 kg	A	
	Refrigerant gas R 407A	2.2	UN3338	*	2.2		306	304	314, 315	75 kg	150 kg	A	
	Refrigerant gas R 407B	2.2	UN3339	*	2.2		306	304	314, 315	75 kg	150 kg	A	
	Refrigerant gas R 407C	2.2	UN3340	*	2.2		306	304	314, 315	75 kg	150 kg	A	
	Thiocarbamate pesticide, liquid, flammable, toxic, flashpoint less than 23 degrees C.	3	UN2772	I	3, 6.1		None	201	243	Forbidden	30 L	B	40
	Thiocarbamate pesticide, liquid, toxic.	6.1	UN3006	I	3, 6.1	T42	None	202	243	1 L	60 L	B	40
					6.1		None	201	243	1 L	30 L	B	40
	Thiocarbamate pesticides, liquid, flammable, toxic, flashpoint not less than 23 degrees C.	6.1	UN3305	I	6.1	T14	153	203	241	5 L	60 L	B	40
					6.1, 3	T42	None	201	243	1 L	30 L	B	40
					6.1		None	202	243	5 L	60 L	B	40
					6.1, 3	T14	153	203	241	60 L	220 L	A	40
					6.1		None	201	243	1 L	30 L	B	40
	Thiocarbamate pesticides, solid, toxic.	6.1	UN2771	I	6.1, 3	T14	None	202	243	5 L	60 L	B	40
					6.1, 3	T13	153	203	242	60 L	220 L	A	40
					6.1		None	211	242	5 kg	50 kg	A	40
					6.1		None	212	242	25 kg	100 kg	A	40

Thiourea dioxide	4.2	*	UN3341	6.1	*	153	213	240	100 kg	200 kg	A	40
		*		4.2	*	None	212	241	15 kg	50 kg	D	
		*		4.2	*	None	213	241	25 kg	100 kg	D	
Vehicle, flammable gas powered.	9	*	UN3166	9	*	135	220	220	Forbidden	No limit	A	
Vehicle, flammable liquid powered.	9	*	UN3166	9	*	135	220	220	No limit	No limit	A	
Wheel chair, electric, see Battery powered vehicle or Battery powered equipment.		*			*				*			
Xanthates	4.2	*	UN3342	4.2	*	None	212	241	15kg	50kg	D	40
		*		4.2	*	None	213	241	25kg	100kg	D	40
[REVISE:]												
Acetonitrile	3	*	UN1648	3	*	T14	202	242	5L	60L	B	40
Aerosols, flammable, n.o.s. (engine starting fluid) (each not exceeding 1 L capacity).	2.1	*	UN1950	2.1	*	N82	306	None	Forbidden	150kg	A	40, 48, 85
Alkaline earth metal alcoholates, n.o.s.	4.2	*	UN3205	4.2	*	65	213	241	25kg	100kg	B	
Aluminum alkyl halides.	4.2	*	UN3052	4.2, 4.3	*	B9, B11, T28, T29, T40.	181	244	Forbidden	Forbidden	D	
Aluminum alkyl hydrides.	4.2	*	UN3076	4.2, 4.3	*	B9, B11, T28, T29, T40.	181	244	Forbidden	Forbidden	D	
Aluminum alkyls	4.2	*	UN3051	4.2, 4.3	*	B9, B11, T28, T29, T40.	181	244	Forbidden	Forbidden	D	
Aminophenols (o-; m-; p).	6.1	*	UN2512	6.1	*	T1	153	240	100 kg	200 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	(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
A, W	Ammonium nitrate fertilizers: unfilled non-segregating mixtures of nitrogen/phosphate or nitrogen/postash types or complete fertilizers of nitrogen/phosphate/postash type, with not more than 70 percent ammonium nitrate and not more than 0.4 percent total added combustible material or with not more than 45 percent ammonium nitrate with unrestrictive combustible material.	9	UN2071	III	9	132	155	213	240	200 kg	200 kg	A	A
G	Articles, explosive, n.o.s.	1.4C	UN0351	II	1.4C	101	None	62	None	Forbidden	75 kg	A	24E
G	Articles, explosive, n.o.s.	1.4D	UN0352	II	1.4D	101	None	62	None	Forbidden	75 kg	A	24E
G	Articles, explosive, n.o.s.	1.4G	UN0353	II	1.4G	101	None	62	None	Forbidden	75 kg	A	24E
	Batteries, wet, filled with acid, electric storage.	8	UN2794	III	8	159	159	159	159	30 kg gross.	No limit	A	A
	Batteries, wet, filled with acid, electric storage.	8	UN2795	III	8	159	159	159	159	30 kg gross.	No limit	A	A
	Batteries, dry, not subject to the requirements of this subchapter.					130							
	Battery-powered vehicle or Battery-powered equipment.	9	UN3171		9	134	220	220	None	No limit	No limit		No limit.

+	Bromine or Bromine solutions.	8	*	UN1744	I	8, 6.1	*	1, A3, A6, B9, B64, B85, N34, N43, T18, T41.	None	226	*	249	*	Forbidden	Forbidden	12, 40, 66, 74, 89, 90
+	Chlorodinitrobenzenes.	6.1	*	UN1577	II	6.1	*	T14	None	212	*	242	*	25 kg	100 kg	A
	Chlorosilanes, corrosive, n.o.s.	8	*	UN2987	II	8	*	B2, T14, T26	154	202	*	242	*	1 L	30 L	C
	Chlorosilanes, flammable, corrosive, n.o.s.	3	*	UN2985	II	3, 8	*	B100, T17, T26	None	201	*	243	*	1 L	5 L	B
	Chlorosilanes, water-reactive, flammable, corrosive, n.o.s.	4.3	*	UN2988	I	4.3, 3.8	*	A2, T18, T26	None	201	*	244	*	Forbidden	1 L	D
D, W A, W	Cotton	9	*	NA1365	*	9	*	137, W41	None	None	*	None	*	No limit	No limit	A
	Cotton waste, oily	4.2	III	UN1364	III	4.2	*		None	213	*	None	*	Forbidden	Forbidden	54
	Detonator assemblies, non-electric for blasting.	1.4S	*	UN0500	II	1.4S	*		63(f), 63(g)	62	*	None	*	25 kg	100 kg	A
	Detonators, electric for blasting.	1.4S	*	UN0456	II	1.4S	*		63(f), 63(g)	62	*	None	*	25 kg	100 kg	A
	Detonators for ammunition.	1.4S	*	UN0366	II	1.4S	*		None	62	*	None	*	25 kg	100 kg	A
	Detonators, non-electric for blasting.	1.4S	*	UN0455	II	1.4S	*		63(f), 63(g)	62	*	None	*	25 kg	100 kg	A
+	Dichloroamines, liquid.	6.1	*	UN1590	II	6.1	*	T14	None	202	*	243	*	5 L	60 L	A
+	Dichloroamines, solid.	6.1	*	UN1590	II	6.1	*	T14	None	212	*	242	*	25 kg	100 kg	A
+	o-Dichlorobenzene	6.1	III	UN1591	III	6.1	*	T7	153	203	*	241	*	60 L	220 L	A
	Dichlorophenyl isocyanates.	6.1	*	UN2250	II	6.1	*		None	212	*	242	*	25 kg	100 kg	B
+	N, N-Diethylaniline	6.1	*	UN2432	III	6.1	*	T2	153	203	*	241	*	60 L	220 L	A
	Diethylzinc	4.2	*	UN1366	I	4.2, 4.3	*	B11, T28, T40	None	181	*	244	*	Forbidden	Forbidden	D
	Dimethylzinc	4.2	*	UN1370	I	4.2, 4.3	*	B11, B16, T28, T29, T40.	None	181	*	244	*	Forbidden	Forbidden	D

§ 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	(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
G	Environmentally hazardous substances, liquid, n.o.s.	9	UN3082	III	9	8, T1	155	203	241	No limit	No limit	A	
G	Environmentally hazardous substances, solid, n.o.s.	9	UN3077	III	9	8, B54, N20	155	213	240	No limit	No limit	A	
+	Epichlorohydrin	6.1	UN2023	II	6.1, 3	T14	None	202	243	5 L	60 L	A	40
A, W	Fibers or Fabrics, animal or vegetable or synthetic, n.o.s. with animal or vegetable oil.	4.2	UN1373	III	4.2	137	None	213	241	Forbidden	Forbidden	A	
	Hexamethylene diisocyanate.	6.1	UN2281	II	6.1	B101, T14	None	202	243	5 L	60 L	C	13, 40
	Hydrogen peroxide, aqueous solutions with not less than 8 percent but less than 20 percent hydrogen peroxide (stabilized as necessary).	5.1	UN2984	III	5.1	A1, B104, T8, T37	152	203	241	2.5 L	30 L	B	25, 75, 106
+	Isobutyl isocyanate.	3	UN2486	I	3, 6.1	1, B9, B14, B30, B72, T37698, T43, T44.	None	226	244	Forbidden	Forbidden	D	40

G	Isocyanates, toxic, flammable, n.o.s. or Isocyanate solutions, toxic, flammable, n.o.s., flash point not less than 23 degrees C but not more than 61 degrees C and boiling point less than 300 degrees C.	6.1	UN3080	II	*	6.1, 3	*	T15	*	None	*	202	*	243	*	5 L	*	60 L	*	B	25, 40, 48
G	Isocyanates, toxic, n.o.s. or Isocyanate solutions, toxic, n.o.s., flash point more than 61 degrees C and boiling point less than 300 degrees C.	6.1	UN2206	II	*	6.1	*	T15	*	None	*	202	*	243	*	5 L	*	60 L	*	E	25, 40, 48
G	Isocyanates, toxic, n.o.s. or Isocyanate solutions, toxic, n.o.s., flash point more than 61 degrees C and boiling point less than 300 degrees C.	6.1	UN2206	III	*	6.1	*	T8	*	153	*	203	*	241	*	60 L	*	220 L	*	E	25, 40, 48
	Isocyanatobenzotrifluorides.	6.1	UN2285	II	*	6.1, 3	*	5, B101, T14	*	None	*	202	*	243	*	5 L	*	60 L	*	D	25, 40, 48
	Lead compounds, soluble, n.o.s.	6.1	UN2291	III	*	6.1	*	138	*	153	*	213	*	240	*	100 kg	*	200 kg	*	A	
	Magnesium alkyls	4.2	UN3053	I	*	4.2, 4.3	*	B11, T28, T29, T40.	*	None	*	181	*	244	*	Forbidden	*	Forbidden	*	D	18
	Nitric acid other than red fuming, with more than 70 percent nitric acid.	8	UN2031	I	*	8, 5.1	*	B47, B53, T9, T27	*	None	*	158	*	243	*	Forbidden	*	2.5 L	*	D	44, 66, 89, 90, 110, 111
+	Nitroanilines (o-, m-, p-).	6.1	UN1661	II	*	6.1	*	T14	*	None	*	212	*	242	*	25 kg	*	100 kg	*	A	
+	Nitroanisole	6.1	UN2730	III	*	6.1	*	T8	*	153	*	213	*	240	*	100 kg	*	200 kg	*	A	
+	Nitrobenzene	6.1	UN1662	II	*	6.1	*	T14	*	None	*	202	*	243	*	5 L	*	60 L	*	A	40
	Nitrogen trifluoride, compressed.	2.2	UN2451	*	*	2.2, 5.1	*		*	None	*	302	*	None	*	Forbidden	*	25 kg	*	D	40

§ 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	(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
+	Nitrophenols (o-; m-; p-).	6.1	UN1663	III	6.1	T8, T38	153	*	213	240	100 kg	200 kg	A
G	Organic pigments, self-heating.	4.2	UN3313	III	4.2		None	*	213	241	25 kg	100 kg	C
G	Organometallic compound or Compound solution or Compound dispersion, water-reactive, flammable, n.o.s.	4.3	UN3207	I	4.3, 3	T28	None	*	201	244	Forbidden	1 L	E
G	Organometallic compound or Compound solution or Compound dispersion, water-reactive, flammable, n.o.s.	4.3	UN3207	II	4.3, 3	T28	None		202	243	1 L	5 L	E
G	Organometallic compound or Compound solution or Compound dispersion, water-reactive, flammable, n.o.s.	4.3	UN3207	III	4.3, 3	T28	None		203	242	5 L	60L	E
D	Other regulated substances, liquid, n.o.s.	9	NA3082	III	9		155	*	203	241	No limit	No limit	A
D	Other regulated substances, solid, n.o.s.	9	NA3077	III	9	B54	155		213	240	No limit	No limit	A
+	Oxygen generator, chemical.	5.1	UN3356	II	5.1	60, A51	None	*	212	None	Forbidden	25 kg gross.	D
+	Phenetidines	6.1	UN2311	III	6.1	T7	153	*	203	241	60 L	220 L	A
+	Phenylenediamines (o-; m-; p-).	6.1	UN1673	III	6.1		153	*	213	240	100 kg	200 kg	A
+	Piperidine	8	UN2401	I	8, 3	T17	None	*	201	243	0.5 L	2.5 L	B



9	*	UN3314	...	III	*	9	*	32	*	155	*	221	*	221	*	100 kg	*	200 kg	*	A	85, 87
<i>Plastic molding compound in dough, sheet or extruded rope form evolving flammable vapor.</i>																					
3	*	UN3269	...	*	*	3	*	40	*	152	*	225	*	None	*	5 kg	*	5 kg	*	B	
9	*	UN2211	...	III	*	None	*	32	*	155	*	221	*	221	*	100 kg	*	200 kg	*	A	85, 87
<i>Polymeric beads, expandable, evolving flammable vapor.</i>																					
3	*	UN1921	...	I	*	3, 6.1	*	A3, N34, T24	*	None	*	201	*	243	*	1 L	*	30 L	*	B	40
<i>Propyleneimine, inhibited.</i>																					
2.2	*	UN2857	...	*	*	2.2	*		*	306, 307	*	306	*	306, 307	*	450 kg	*	450 kg	*	A	
<i>Refrigerating machines, containing non-flammable, nontoxic, liquefied gas or ammonia solution (UN2672).</i>																					
6.1	*	UN1687	...	II	*	6.1	*		*	None	*	212	*	242	*	25 kg	*	100 kg	*	A	36, 52, 91
5.1	*	UN1500	...	III	*	5.1, 6.1	*	A1, A29	*	152	*	213	*	240	*	25 kg	*	100 kg	*	A	56, 58
9	*	NA1350	...	III	*	9	*	30, A1	*	None	*	None	*	240	*	No limit	*	No limit	*	A	19, 74
4.1	*	UN1350	...	III	*	4.1	*	30, A1, N20, T1	*	None	*	None	*	240	*	No limit	*	No limit	*	A	19, 74
6.1	*	UN2078	...	II	*	6.1	*	B110, T14	*	None	*	202	*	243	*	5 L	*	60 L	*	D	25, 40
<i>Toluene disocyanate.</i>																					
6.1	*	UN1708	...	II	*	6.1	*	T14	*	None	*	202	*	243	*	5 L	*	60 L	*	A	
6.1	*	UN1708	...	II	*	6.1	*		*	None	*	212	*	242	*	25 kg	*	100 kg	*	A	
<i>Vanadium pentoxide, non-fused form.</i>																					
6.1	*	UN2862	...	III	*	6.1	*		*	153	*	213	*	240	*	100 kg	*	200 kg	*	A	40
<i>Water-reactive solid, flammable, n.o.s.</i>																					
4.3	*	UN3132	...	I	*	4.3, 4.1	*	B101, B106, N40	*	None	*	211	*	242	*	Forbidden	*	15 kg	*	D	

**§ 172.101 [Amended]**

14. In addition, in Column (1), in the § 172.101 Hazardous Materials Table, new letter "G" is added for each of the following entries:

- Alcoholates solution, n.o.s., *in alcohol*.  
 Alcohols, flammable, toxic, n.o.s.  
 Aldehydes, flammable, toxic, n.o.s.  
 Alkali metal alcoholates, self-heating, corrosive, n.o.s.  
 Alkaline earth metal alcoholates, n.o.s.  
 Alkaloids, liquid, n.o.s. *or* Alkaloid salts, liquid, n.o.s.  
 Alkaloids, solid, n.o.s. *or* Alkaloid salts, solid, n.o.s. *poisonous*.  
 Amines, flammable, corrosive, n.o.s. *or* Polyamines, flammable, corrosive, n.o.s.  
 Amines, liquid, corrosive, flammable, n.o.s. *or* Polyamines, liquid, corrosive, flammable, n.o.s.  
 Amines, liquid, corrosive, n.o.s. *or* Polyamines, liquid, corrosive, n.o.s.  
 Amines, solid, corrosive, n.o.s., *or* Polyamines, solid, corrosive, n.o.s.  
 Ammunition, toxic *with burster, expelling charge, or propelling charge*. (two entries, UN0020 and UN0021)  
 Articles, explosive, n.o.s. (UN0349, UN0350, UN0354, UN0355, UN0356, UN0462, UN0463, UN0464, UN0465, UN0466, UN0467, UN0468, UN0469, UN0470, UN0471, UN0472)  
 Caustic alkali liquids, n.o.s.  
 Chloroformates, toxic, corrosive, flammable, n.o.s.  
 Chloroformates, toxic, corrosive, n.o.s.  
 Combustible liquid, n.o.s.  
 Components, explosive train, n.o.s. (all four entries)  
 Compounds, cleaning liquid (two entries, NA1760 and NA1993)  
 Compressed gas, flammable, n.o.s.  
 Compressed gas, n.o.s.  
 Compressed gas, oxidizing, n.o.s.  
 Compressed gas, toxic, oxidizing, n.o.s. (All hazard zones, four entries)  
 Compressed gases, toxic, flammable, n.o.s. (All hazard zones, four entries)  
 Compressed gases, toxic, n.o.s. (All hazard zones, four entries)  
 Corrosive, liquid, acidic, inorganic, n.o.s.  
 Corrosive, liquid, acidic, organic, n.o.s.  
 Corrosive, liquid, basic, inorganic, n.o.s.  
 Corrosive, liquid, basic, organic, n.o.s.  
 Corrosive liquid, self-heating, n.o.s.  
 Corrosive liquids, flammable, n.o.s.  
 Corrosive liquids, n.o.s.  
 Corrosive liquids, oxidizing, n.o.s.  
 Corrosive liquids, toxic, n.o.s.  
 Corrosive liquids, water-reactive, n.o.s.  
 Corrosive, solid, acidic, inorganic, n.o.s.  
 Corrosive, solid, acidic, organic, n.o.s.  
 Corrosive, solid, basic, inorganic, n.o.s.  
 Corrosive, solid, basic, organic, n.o.s.  
 Corrosive solids, flammable, n.o.s.  
 Corrosive solids, n.o.s.  
 Corrosive solids, oxidizing, n.o.s.  
 Corrosive solids, self-heating, n.o.s.  
 Corrosive solids, toxic, n.o.s.  
 Corrosive solids, water-reactive, n.o.s.  
 Disinfectant, liquid, corrosive, n.o.s.  
 Disinfectants, liquid, corrosive n.o.s.  
 Disinfectants, liquid, toxic, n.o.s.  
 Disinfectants, solid, toxic, n.o.s.  
 Dispersant gases, n.o.s. *see* Refrigerant gases, n.o.s.
- Dyes, liquid, corrosive, n.o.s. *or* Dye intermediates, liquid, corrosive, n.o.s.  
 Dyes, liquid, toxic, n.o.s. *or* Dye intermediates, liquid, toxic, n.o.s.  
 Dyes, solid, corrosive, n.o.s. *or* Dye intermediates, solid, corrosive, n.o.s.  
 Dyes, solid, toxic, n.o.s. *or* Dye intermediates, solid, toxic, n.o.s.  
 Flammable liquid, toxic, corrosive, n.o.s.  
 Flammable liquids, corrosive, n.o.s.  
 Flammable liquids, n.o.s.  
 Flammable liquids, toxic, n.o.s.  
 Flammable solid, corrosive, inorganic, n.o.s.  
 Flammable solid, inorganic, n.o.s.  
 Flammable solid, organic, molten, n.o.s.  
 Flammable solid, toxic, inorganic, n.o.s.  
 Flammable solids, corrosive, organic, n.o.s.  
 Flammable solids, organic, n.o.s.  
 Flammable solids, toxic, organic, n.o.s.  
 Gas, refrigerated liquid, flammable, n.o.s. (*cryogenic liquid*).  
 Gas, refrigerated liquid, n.o.s. (*cryogenic liquid*).  
 Gas, refrigerated liquid, oxidizing, n.o.s. (*cryogenic liquid*).  
 Infectious substances, affecting animals *only*.  
 Infectious substances, affecting humans.  
 Insecticide gases, n.o.s.  
 Insecticide gases, toxic, n.o.s.  
 Isocyanates, flammable, toxic, n.o.s. *or* Isocyanate solutions, flammable, toxic, n.o.s. *flashpoint less than 23 degrees C*.  
 Isocyanate, toxic, flammable, n.o.s. *or* Isocyanate solutions, toxic, flammable, n.o.s., *flash point not less than 23 degrees C but not more than 61 degrees C and boiling point less than 300 degrees C*.  
 Ketones, liquid, n.o.s.  
 Liquefied gas, flammable, n.o.s.  
 Liquefied gas, n.o.s.  
 Liquefied gas, oxidizing, n.o.s.  
 Liquefied gas, toxic, flammable, n.o.s. (All hazard zone entries)  
 Liquefied gas, toxic, n.o.s. (All hazard zone entries)  
 Liquefied gas, toxic, oxidizing, n.o.s. (All hazard zone entries)  
 Metal salts of organic compounds, flammable, n.o.s.  
 Metallic substance, water-reactive, n.o.s.  
 Metallic substance, water-reactive, self-heating, n.o.s.  
 Nitriles, flammable, toxic, n.o.s.  
 Nitriles, toxic, flammable, n.o.s.  
 Nitriles, toxic, n.o.s.  
 Organic peroxide type B, liquid  
 Organic peroxide type B, liquid, temperature controlled  
 Organic peroxide type B, solid  
 Organic peroxide type B, solid, temperature controlled  
 Organic peroxide type C, liquid  
 Organic peroxide type C, liquid, temperature controlled  
 Organic peroxide type C, solid  
 Organic peroxide type C, solid, temperature controlled  
 Organic peroxide type D, liquid  
 Organic peroxide type D, liquid, temperature controlled  
 Organic peroxide type D, solid  
 Organic peroxide type D, solid, temperature controlled  
 Organic peroxide type E, liquid  
 Organic peroxide type E, liquid, temperature controlled
- Organic peroxide type E, solid  
 Organic peroxide type E, solid, temperature controlled  
 Organic peroxide type F, liquid  
 Organic peroxide type F, liquid, temperature controlled  
 Organic peroxide type F, solid  
 Organic peroxide type F, solid, temperature controlled  
 Organometallic compound, toxic, n.o.s.  
 Oxidizing liquid, corrosive, n.o.s.  
 Oxidizing liquid, n.o.s.  
 Oxidizing liquid, toxic, n.o.s.  
 Oxidizing solid, corrosive, n.o.s.  
 Oxidizing solid, flammable, n.o.s.  
 Oxidizing solid, n.o.s.  
 Oxidizing solid, self-heating, n.o.s.  
 Oxidizing solid, toxic, n.o.s.  
 Oxidizing solid, water-reactive, n.o.s.  
 Pesticides, liquid, flammable, toxic, *flashpoint less than 23 degrees C*.  
 Pesticides, liquid, toxic, flammable, n.o.s. *flashpoint not less than 23 degrees C*.  
 Pesticides, liquid, toxic, n.o.s.  
 Pesticides, solid, toxic, n.o.s.  
 Pyrophoric liquid, inorganic, n.o.s.  
 Pyrophoric liquids, organic, n.o.s.  
 Pyrophoric metals, n.o.s. *or* Pyrophoric alloys, n.o.s.  
 Pyrophoric organometallic compound, n.o.s.  
 Pyrophoric solid, inorganic, n.o.s.  
 Pyrophoric solids, organic, n.o.s.  
 Refrigerant gases, n.o.s.  
 Samples, explosive, *other than initiating explosives*  
 Self-heating liquid, corrosive, inorganic, n.o.s.  
 Self-heating liquid, corrosive, organic, n.o.s.  
 Self-heating liquid, inorganic, n.o.s.  
 Self-heating liquid, organic, n.o.s.  
 Self-heating liquid, toxic, inorganic, n.o.s.  
 Self-heating liquid, toxic, organic, n.o.s.  
 Self-heating solid, corrosive, inorganic, n.o.s.  
 Self-heating, solid, corrosive, organic, n.o.s.  
 Self-heating solid, inorganic, n.o.s.  
 Self-heating, solid, organic, n.o.s.  
 Self-heating, solid, oxidizing, n.o.s.  
 Self-heating solid, toxic, inorganic, n.o.s.  
 Self-heating, solid, toxic, organic, n.o.s.  
 Self-reactive liquid type B  
 Self-reactive liquid type B, temperature controlled  
 Self-reactive liquid type C  
 Self-reactive liquid type C, temperature controlled  
 Self-reactive liquid type D  
 Self-reactive liquid type D, temperature controlled  
 Self-reactive liquid type E  
 Self-reactive liquid type E, temperature controlled  
 Self-reactive liquid type F  
 Self-reactive liquid type F, temperature controlled  
 Self-reactive solid type B  
 Self-reactive solid type B, temperature controlled  
 Self-reactive solid type C  
 Self-reactive solid type C, temperature controlled  
 Self-reactive solid type D  
 Self-reactive solid type D, temperature controlled  
 Self-reactive solid type E  
 Self-reactive solid type E, temperature controlled

Self-reactive solid type F  
 Self-reactive solid type F, temperature controlled  
 Solids containing corrosive liquid, n.o.s.  
 Solids containing flammable liquid, n.o.s.  
 Solids containing toxic liquid, n.o.s.  
 Substances, explosive, n.o.s. (all 13 entries)  
 Substances, explosive, very insensitive, n.o.s., or Substances, EVI, n.o.s.  
 Tear gas substances, liquid, n.o.s.  
 Tear gas substances, solid, n.o.s.  
 Toxic liquid, corrosive, inorganic, n.o.s. (UN3289, PG I AND II)  
 Toxic liquids, corrosive, inorganic, n.o.s. (UN3289, Hazard Zones A and B)  
 Toxic liquids, inorganic n.o.s. (UN3287, PG I and III)  
 Toxic liquids, corrosive, organic, n.o.s. (UN2927, PG I and II)  
 Toxic liquids, corrosive, organic, n.o.s. (UN2927, Hazard Zones A and B)  
 Toxic liquids, flammable, organic, n.o.s. (UN2929, PG I and II)  
 Toxic liquids, flammable, organic, n.o.s. (UN2929, Hazard Zones A and B)  
 Toxic liquids, organic, n.o.s. (UN2810, PG I, II and III)  
 Toxic liquids, organic, n.o.s. (UN2810, Hazard Zones A and B)  
 Toxic liquids, oxidizing, n.o.s. (UN3122, PG I and II)  
 Toxic liquids, oxidizing, n.o.s. (UN3122, Hazard Zones A and B)  
 Toxic liquids, water-reactive, n.o.s. (UN3132, PG I and II)

Toxic liquids, water-reactive, n.o.s. (UN3123, Hazardous Zones A and B)  
 Toxic solid, corrosive, organic, n.o.s.  
 Toxic solid, inorganic, n.o.s.  
 Toxic solids, corrosive, organic, n.o.s.  
 Toxic solids, flammable, organic, n.o.s.  
 Toxic solids, organic, n.o.s.  
 Toxic solids, oxidizing, n.o.s.  
 Toxic solids, self-heating, n.o.s.  
 Toxic solids, water-reactive, n.o.s.  
 Water-reactive, liquid, corrosive, n.o.s.  
 Water-reactive, liquid, n.o.s.  
 Water-reactive, liquid, toxic, n.o.s.  
 Water-reactive, solid, corrosive, n.o.s.  
 Water-reactive, solid, n.o.s.  
 Water-reactive, solid, oxidizing, n.o.s.  
 Water-reactive, solid, self-heating, n.o.s.  
 Water-reactive, solid, toxic, n.o.s.

(UN3305, Hazard Zones A, B, C and D), the reference “, G” is added.  
 e. For the entry, Compressed gas, toxic, oxidizing, corrosive, n.o.s. (UN3306, Hazard Zones A, B, C and D), the reference “, G” is added.  
 f. For the entries Hazardous waste, liquid, n.o.s. and Hazardous waste, solid, n.o.s., the reference “, G” is added.  
 g. For the entry, Insecticide gases flammable n.o.s., the reference “, G” is added.  
 h. For the entry, Liquefied gas, toxic, corrosive, n.o.s. (UN3308, Hazard Zones A, B, C and D), the reference “, G” is added.  
 i. For the entry, Liquefied gas, toxic, flammable, corrosive, n.o.s. (UN3309, Hazard Zones A, B, C and D), the reference “, G” is added.  
 j. For the entry, Liquefied gas, toxic, oxidizing, corrosive, n.o.s. (UN3310, Hazard Zones A, B, C and D), the reference “, G” is added.  
 15. In Appendix B to § 172.101, the List of Marine Pollutants is amended by removing ten entries and adding sixteen entries in alphabetical order to read as follows:

**Appendix B to § 172.101—List of Marine Pollutants**

S.M.P (1)	Marine pollutant (2)
[REMOVE:]	Alkyl (C10–C21) sulphonic acid ester of phenol. ortho-Anisidines. Barium compounds, soluble, n.o.s. Di- <i>normal</i> -butyl ketone. Diphenyl oxide. Isopropenyl chloride. Isopropyl chloride. 3-Methylpyradine. Sym-Dichloroethyl ether. Tetrachlorovinphos.
[ADD:]	
*	Alkylbenzenesulphonates, branched and straight chain.
PP .....	Chlorinated paraffins (C14–C17), with more than 1% shorter chain length.
*	1-Chloro-2,3-Epoxypropane.
PP .....	Copper sulphate, anhydrous, hydrates.
*	Dichlorodimethyl ether, symmetrical.
*	Isobutyl aldehyde. Isobutyraldehyde.
*	Maneb.

S.M.P		Marine pollutant	
(1)		(2)	
*	*	*	*
		Maneb preparation, stabilized against self-heating.	
*	*	*	*
PP	.....	N,N-Dimethyldodecylamine.	
*	*	*	*
		Nitrotoluenes (ortho-; meta-; para-), solid.	
*	*	*	*
		<i>normal</i> -heptaldehyde.	
*	*	*	*
		Potassium cyanide, solution.	
*	*	*	*
		Sodium cyanide, solution.	
*	*	*	*
		Triphenyl phosphate/tert-butylated triphenyl phosphates mixtures containing 5% to 10% triphenyl phosphates.	
PP	.....	Triphenyl phosphate/tert-butylated triphenyl phosphates mixtures containing 10% to 48% triphenyl phosphates.	
*	*	*	*

§ 172.101 Appendix B [Amended]

16. In addition, in Appendix B to § 172.101, the List of Marine Pollutants, the following changes are made:

a. In column (1), the designation "PP" is added for the following entries:

- "Azinphos-methyl."
- "Cupric chloride"
- "Cuprous chloride"
- "Furathiocarb (ISO)"
- "Osmium tetroxide"
- "Triphenylphosphate"

b. In column (1), the designation "PP" is removed for the entry "Silver orthoarsenite".

c. In column (2), the following language is revised to read as follows:

"Alcohol C-12-C-15 poly(1-3) ethoxylate" is revised to read "Alcohol C-12-C-16 poly(1-6) ethoxylate".

"Alkylphenols, liquid, n.o.s. (including C2-C8 homologues)" is revised to read "Alkylphenols, liquid, n.o.s. (including C2-C12 homologues)".

"Alkylphenols, solid, n.o.s. (including C2-C8 homologues)" is revised to read "Alkylphenols, solid, n.o.s. (including C-2-C-12 homologues)".

"2-Butenal, inhibited" is revised to read "2-Butenal, stabilized".

"Chlorodinitrobenzenes" is revised to read "Chlorodinitrobenzenes, liquid or solid".

"Chlorophenates, liquid" is revised to read "Chlorophenolates, liquid".

"Chlorophenates, solid" is revised to read "Chlorophenolates, solid".

"Chlorotoluenes" is revised to read "Chlorotoluenes (ortho-,meta-,para)".

"Crotonaldehyde, inhibited" is revised to read "Crotonaldehyde, stabilized".

"Crotonic aldehyde" is revised to read "Crotonic aldehyde, stabilized".

"Decyloxytetrahydrothiophene dioxide" is revised to read "Decyloxytetrahydrothiophene dioxide".

"Dichloroethyl ether" is revised to read "Di-(2-chloroethyl) ether".

"Dodecylamine" is revised to read "1-Dodecylamine".

"Hydrocyanic acid, anhydrous, stabilized" is revised to read "Hydrocyanic acid, anhydrous, stabilized, containing less than 3% water".

"Hydrocyanic acid, anhydrous, stabilized, absorbed in a porous inert material" is revised to read "Hydrocyanic acid, anhydrous, stabilized, containing less than 3% water and absorbed in a porous inert material".

"Isobutybenzene" is revised to read "Isobutylbenzene".

"Maneb or Maneb preparations with not less than 60 per cent maneb" is revised to read "Maneb preparations with not less than 60% maneb".

"Mercarbam" is revised to read "Mecarbam".

"Mercurous bisuphate" is revised to read "Mercurous bisulphate".

"Mercury based pesticides, liquid, flammable, toxic, n.o.s." is revised to read "Mercury based pesticide, liquid, flammable, toxic".

"Mercury based pesticides, liquid, toxic, flammable, n.o.s." is revised to read "Mercury based pesticide, liquid, toxic, flammable".

"Mercury based pesticides, liquid, toxic, n.o.s." is revised to read "Mercury based pesticide, liquid, toxic".

"Mercury based pesticides, solid, toxic, n.o.s." is revised to read "Mercury based pesticide, solid, toxic".

"3-Methylacroleine, inhibited" is revised to read "3-Methylacrolein, stabilized".

"Nitrobenzotrifluorides" is revised to read "Nitrobenzotrifluorides, liquid or solid".

"Nitrotolueunes (o-;m;-p-)" is revised to read "Nitrotoluenes (ortho-;meta-;para-), liquid".

"Nitroxyluenes, (o-;m;-p-)" is revised to read "Nitroxylenes, liquid or solid".

"Potassium cyanide" is revised to read "Potassium cyanide, solid".

"Potassium cyanocuprate I" is revised to read "Potassium cyanocuprate (I)".

"Sodium cyanide" is revised to read "Sodium cyanide, solid".

"Tetrachloroethane" is revised to read "1,1,2,2-Tetrachloroethane".

"Tetramethylbenzenes" is revised to read "n-Tetramethylbenzenes".

"Tricresyl phosphate (not less than 1% ortho-isomer)" is revised to read "Tricresyl phosphate, not less than 1% ortho-isomer but not more than 3% orthoisomer".

"White phosphorus, molten" is revised to read "Phosphorus, white, molten".

“Yellow phosphorus, molten” is revised to read “Phosphorus, yellow, molten”.

d. The entries, as amended, are placed in alphabetical order.

17. In § 172.102, in paragraph (c)(1), Special Provision 43 is amended by adding a sentence at the end, Special Provisions 129, 130, 131, 132, 133, 134, 135, 136, 137 and 138 are added; in paragraph (c)(2), Special Provision A35 is added; and in paragraph (c)(3), Special Provision B101 is revised to read as follows:

**§ 172.102 Special provisions.**

\* \* \* \* \*  
(c) \* \* \*  
(1) \* \* \*

**Code/Special Provisions**

\* \* \* \* \*

43. \* \* \* Nitrocellulose membrane filters covered by this entry, each with a mass not exceeding 0.5 g, are not subject to the requirements of this subchapter when contained individually in an article or a sealed packet.

\* \* \* \* \*

129. These materials may not be classified and transported unless authorized by the Associate Administrator for Hazardous Materials Safety on the basis of results from Series 2 Test and a Series 6(c) Test from the UN Manual of Tests and Criteria on packages as prepared for transport. The packing group assignment and packaging must be approved by the Associate Administrator for Hazardous Materials Safety on the basis of the criteria in § 173.21 of this subchapter and the package type used for the Series 6(c) test.

130. Batteries, dry are not subject to the requirements of this subchapter only when they are offered for transportation in a manner that prevents the dangerous evolution of heat (for example, by the effective insulation of exposed terminals).

131. This material may not be offered for transportation unless approved by the Associate Administrator for Hazardous Materials Safety.

132. Ammonium nitrate fertilizers of this composition are not subject to the requirements of this subchapter if shown by a trough test (see United Nations Recommendations on the Transport of Dangerous Goods, Manual Tests and Criteria, Part III, sub-section 38.2) not to be liable to self-sustaining decomposition and provided that they do not contain an excess of nitrate greater than 10% by mass (calculated as potassium nitrate).

133. This description applies to articles which are used as life-saving vehicle air bag inflators or air bag modules or seat-belt pretensioners, containing a gas or a mixture of compressed gases classified under Division 2.2, and with or without small quantities of pyrotechnic material. For units with pyrotechnic material, initiated explosive effects must be contained within the pressure vessel (cylinder) such that the unit may be excluded from Class 1 in accordance with paragraphs 1.11(b) and

16.6.1.4.7(a)(ii) of the UN Manual of Tests and Criteria, Part 1. In addition, units must be designed or packaged for transport so that when engulfed in a fire there will be no fragmentation of the pressure vessel or projection hazard. This may be determined by analysis or test. The pressure vessel must be in conformance with the requirements of this subchapter for the gas(es) contained in the pressure vessel or as specifically authorized by the Associate Administrator for Hazardous Materials Safety.

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

135. The entries “Vehicle, flammable gas powered” or “Vehicle, flammable liquid powered”, as appropriate, must be used when internal combustion engines are installed in a vehicle.

136. This entry only applies to machinery and apparatus containing hazardous materials as an integral element of the machinery or apparatus. It may not be used to describe machinery or apparatus for which a proper shipping name exists in the § 172.101 Table. Machinery or apparatus may only contain hazardous materials for which exceptions are referenced in Column 8 of the § 172.101 Table and are provided in Part 173, Subpart D, of this subchapter. Hazardous materials shipped under this entry are excepted from the labeling requirements of this subchapter unless offered for transportation or transported by aircraft. For transportation by aircraft, the machinery or apparatus must be labeled according to each of the hazardous materials contained in the machinery or apparatus. This includes the primary hazard label and any applicable subsidiary risk labels, except that a subsidiary risk label is not required for any subsidiary hazard already indicated by the primary or subsidiary hazard label applied for another substance in the machinery or apparatus. Orientation markings as prescribed in § 172.312 are required only when necessary to ensure that liquid hazardous materials remain in their intended orientation. The machinery or apparatus or the packagings in which they are contained shall be marked “Dangerous goods in machinery” or “Dangerous goods in apparatus”, as appropriate, and with the appropriate identification number. For transportation by aircraft, machinery or apparatus may not contain any material forbidden for transportation by passenger aircraft. Hazardous materials in machinery or apparatus are not subject to the placarding requirements of subpart F of this part. The Associate Administrator for Hazardous Materials Safety may except from the requirements of this subchapter equipment, machinery and apparatus provided:

a. It is shown that it does not pose a significant risk in transportation;

b. The quantities of hazardous materials do not exceed those specified in § 173.4 of this subchapter for the applicable class(es) of hazardous materials contained in § 173.4 of this subchapter; and

c. The equipment, machinery or apparatus conforms with § 173.222 of this subchapter.

137. Cotton, dry is not subject to the requirements of this subchapter when it is baled in accordance with ISO 8115, “Cotton Bales—Dimensions and Density” to a density of at least 360 kg/m<sup>3</sup> (22.4lb/ft<sup>3</sup>) and it is transported in a freight container or closed transport vehicle.

138. Lead compounds which, when mixed in a ratio of 1:1000 with 0.07M (Molar concentration) hydrochloric acid and stirred for one hour at a temperature of 23°C ± 2°C, exhibit a solubility of 5% or less are considered insoluble.

(2) \* \* \*

**Code/Special Provisions**

\* \* \* \* \*

A35. This includes any material which is not covered by any of the other classes but which has an anesthetic, narcotic, noxious or other similar properties such that, in the event of spillage or leakage on an aircraft, extreme annoyance or discomfort could be caused to crew members so as to prevent the correct performance of assigned duties.

\* \* \* \* \*

(3) \* \* \*

**Code/Special Provisions**

\* \* \* \* \*

B101. When intermediate bulk containers are used, only those constructed of metal are authorized.

\* \* \* \* \*

**§ 172.102 [Amended]**

18. In addition, in § 172.102, the following changes are made:

a. In paragraph (c)(1), Special Provision 17 is removed.

b. In paragraph (c)(1), Special Provision 20 is removed.

c. In paragraph (c)(1), Special Provision 104 is removed.

d. In paragraph (c)(1), under Special Provision 125, in the fourth sentence, the wording “at least 90%” is removed and “at least 98%” is added in its place; and in the last sentence, the wording “less than 98%” is removed and “less than 90%” is added in its place.

e. In paragraph (c)(5), Special Provision N9 is removed.

**§ 172.203 [Amended]**

19. In § 172.203, the following changes are made:

a. In paragraph (k) introductory text, in the first sentence, the wording “listed in paragraph (k)(3) of this section” is removed and “identified by the letter ‘G’ in Column (1) of the § 172.101 Table” is added in its place.

b. In paragraph (k)(1), in the first sentence, the wording “listed herein” is

removed and "identified by the letter "G" in Column (1) of the § 172.101 Table" is added in its place.

c. In addition, paragraph (k)(3) is removed and paragraph (k) (4) is redesignated as new paragraph (k)(3).

20. In § 172.313, a new paragraph (d) is added to read as follows:

§ 172.313 Poisonous hazardous materials.

\* \* \* \* \*

(d) For a packaging containing a Division 6.1 PG III material, "PG III" may be marked adjacent to the POISON label. (See § 172.405(c).)

§ 172.400 [Amended]

21. In § 172.400, in the table in paragraph (b), the following changes are made:

a. In column 1, the language "6.1 (PG I or II, other than Zone A or B inhalation hazard)" is revised to read "6.1 (other than inhalation hazard, Zone A or B)".

b. The entry "6.1 (PG III)" is removed.

§ 172.400a [Amended]

22. In § 172.400a, paragraph (d) is removed.

23. In § 172.405, a new paragraph (c) is added to read as follows:

§ 172.405 Authorized label modifications.

\* \* \* \* \*

(c) For a package containing a Division 6.1, Packing Group III material, the POISON label specified in § 172.430 may be modified to display the text "PG III" instead of "POISON" or "TOXIC" below the mid line of the label. Also see § 172.313(d).

24. In § 172.407, paragraph (c)(4) is revised to read as follows:

§ 172.407 Label specifications.

\* \* \* \* \*

(c) \* \* \*

(4) When text indicating a hazard is displayed on a label, the label name must be shown in letters measuring at least 7.6 mm (0.3 inches) in height. For SPONTANEOUSLY COMBUSTIBLE or DANGEROUS WHEN WET labels, the words "Spontaneously" and "When Wet" must be shown in letters measuring at least 5.1 mm (0.2 inches) in height.

\* \* \* \* \*

§ 172.431 [Removed and Reserved]

25. Section 172.431 is removed and reserved.

26. In § 172.504, paragraph (f)(10) is revised to read as follows:

§ 172.504 General placarding requirements.

\* \* \* \* \*

(f) \* \* \*

(10) For Division 6.1, PG III materials, a POISON placard may be modified to

display the text "PG III" below the mid line of the placard.

\* \* \* \* \*

§ 172.504 [Amended]

27. In § 172.504, in paragraph (e), in Table 2, the following changes are made:

a. In column 2, the language "6.1 (PG I or II, other than Zone A or B inhalation hazard)" is revised to read "6.1 (other than inhalation hazard, Zone A or B)".

b. The entry "6.1 (PG III)" is removed.

§ 172.553 [Removed and Reserved]

28. Section 172.553 is removed and reserved.

PART 173—SHIPPERS—GENERAL REQUIREMENTS FOR SHIPMENTS AND PACKAGINGS

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

Authority: 49 U.S.C. 5101-5127, 44701; 49 CFR 1.45, 1.53.

§ 173.1 [Amended]

30. In § 173.1, in paragraph (d), in the first sentence, the wording "Recommendations of the United Nations Committee of Experts on the Transport of Dangerous Goods" is removed and "UN Recommendations" is added in its place.

§ 173.2a [Amended]

31. In § 173.2a, paragraph (b), Precedence of Hazard Table, in column 13, under the column heading "8, II liquid", the following changes are made:

a. For the entry, "4.3 II", the numeral "8" is removed and "4.3" is added in its place.

b. For the entry, "5.1 II", the numeral "8" is removed and "5.1" is added in its place.

32. In § 173.25, the section heading and paragraph (b) are revised to read as follows:

§ 173.25 Authorized packagings and overpacks.

\* \* \* \* \*

(b) Shrink-wrapped or stretch-wrapped trays may be used as outer packagings for inner packagings prepared in accordance with the limited quantity provisions or consumer commodity provisions of this subchapter, provided that—

(1) Inner packagings are not fragile, liable to break or be easily punctured, such as those made of glass, porcelain, stoneware or certain plastics; and

(2) Each complete package does not exceed 20 kg (44 lbs) gross weight.

\* \* \* \* \*

33. In § 173.28, paragraph (c)(2) is revised and a new paragraph (c)(5) is added to read as follows:

§ 173.28 Reuse, reconditioning and remanufacture of packagings.

\* \* \* \* \*

(c) \* \* \*

(2) For the purpose of this subchapter, reconditioning of a non-bulk packaging other than a metal drum includes:

(i) Removal of all former contents, external coatings and labels, and cleaning to the original materials of construction;

(ii) Inspection after cleaning with rejection of packagings with visible damage such as tears, creases or cracks, or damaged threads or closures, or other significant defects;

(iii) Replacement of all non-integral gaskets and closure devices with new or refurbished parts, and cushioning and cushioning materials; and components including gaskets, closure devices and cushioning and cushioning material; and

(iv) Ensuring that the packagings are restored to a condition that conforms in all respects with the prescribed requirements of this subchapter.

\* \* \* \* \*

(5) Packagings which have significant defects which cannot be repaired may not be reused.

\* \* \* \* \*

34. In § 173.29, paragraph (b)(2)(iv)(B) is revised to read as follows:

§ 173.29 Empty packagings.

\* \* \* \* \*

(b) \* \* \*

(2) \* \* \*

(iv) \* \* \*

(B) A Division 2.2 non-flammable gas, other than ammonia, anhydrous, and with no subsidiary hazard, at an absolute pressure less than 280 kPa (40.6 psia); at 20° C (68° F); and

\* \* \* \* \*

35. In § 173.32b, in paragraph (b)(1), the semicolon is removed and a period is added in its place and a new sentence is added at the end of the paragraph to read as follows:

§ 173.32b Periodic testing and inspection of Specification IM portable tanks.

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \* The two and one-half year internal inspection may be waived for portable tanks dedicated to the transportation of a single hazardous material if it is leakproofness tested prior to each filling, or if approved by the Associate Administrator for Hazardous Materials Safety.

\* \* \* \* \*

§ 173.32b [Amended]

36. In addition, in § 173.32b, in paragraph (b)(2), the semicolon at the

end is removed and a period is added in its place.

37. In § 173.32c, paragraph (j) is revised to read as follows:

**§ 173.32c Use of Specification IM portable tanks.**

\* \* \* \* \*

(j) Except for a non-flowable solid or a liquid with a viscosity of 2,680 centistokes (millimeters squared per second) or greater at 20°C, an IM portable tank or compartment thereof having a volume greater than 7,500 L (1,980 gallons) may be loaded to a filling density of more than 20% and less than 80% by volume. If a portable tank is divided by partitions or surge plates into compartments of not more than 7,500 L capacity, this filling restriction does not apply.

\* \* \* \* \*

38. In § 173.34, in the paragraph (e) table, the following changes are made:

a. In Column 1, in the last entry, footnote reference <sup>4</sup> is added immediately after the wording "(see § 173.301(j) for restrictions on use)."

b. A new footnote is added at the end of the table to read as follows: <sup>4</sup> For CTC cylinders, see § 173.301(i). The retest period for CTC cylinders authorized under § 173.301(i) is the period specified in the table for the corresponding DOT specification cylinder."

39. In § 173.35, the section heading and paragraph (b) are revised to read as follows:

**§ 173.35 Hazardous materials in intermediate bulk containers (IBCs).**

\* \* \* \* \*

(b) Initial use and reuse of IBCs. An IBC other than a multiwall paper IBC (13M1 and 13M2) may be reused. If an inner liner is required, the inner liner must be replaced before each reuse. Before an IBC is filled and offered for transportation, the IBC and its service equipment must be given an external visual inspection, by the person filling the IBC, to ensure that:

(1) The IBC is free from corrosion, contamination, cracks, cuts, or other damage which would render it unable to pass the prescribed design type test to which it is certified and marked; and

(2) The IBC is marked in accordance with requirements in § 178.703 of this subchapter. Additional marking allowed for each design type may be present. Required markings that are missing, damaged or difficult to read must be restored or returned to original condition.

\* \* \* \* \*

**§ 173.56 [Amended]**

40. In § 173.56, in paragraph (b)(2)(i), the wording "(TB 700-2, dated December 1989)" is removed and "(TB 700-2)" is added in its place; and in paragraph (b)(3)(i), the wording "(TB 700-2, dated December 1989)" is removed and "(TB 700-2)" is added in its place.

**§ 173.59 [Amended]**

41. In § 173.59, for the definitions "*Charges, explosive, commercial without detonator*" and "*Charges, shaped commercial, without detonator*", the word "commercial" is removed each place it appears.

42. In § 173.121, paragraph (b)(1)(ii) is revised to read as follows:

**§ 173.121 Class 3—Assignment of packing group.**

\* \* \* \* \*

(b) \* \* \*

(1) \* \* \*

(ii) The mixture does not contain any substances with a primary or a subsidiary risk of Division 6.1 or Class 8;

\* \* \* \* \*

**§ 173.159 [Amended]**

43. In § 173.159, in paragraph (g)(2), in the first sentence immediately following the wording "may be packed in strong", the words "plywood or wooden boxes" are removed and "rigid outer packagings" is added in its place.

44. Section 173.162 is revised to read as follows:

**§ 173.162 Gallium.**

(a) Except when packaged in cylinders or steel flasks, gallium must be packaged in packagings which meet the requirements of part 178 of this subchapter at the Packing Group I performance level for transport by aircraft and the Packing Group III performance level for transport by highway, rail or vessel.

(1) In packagings intended to contain liquids consisting of glass, earthenware or rigid plastics with a maximum net mass of 10 kg (22 pounds) each. The inner packagings must be packed in wooden boxes (4C1, 4C2, 4D, 4F), fiberboard boxes (4G), plastics boxes (4H1, 4H2), fiber drums (1G) or removable head steel and plastic drums or jerricans (1A2, 1H2, 3A2 or 3H2) with sufficient cushioning material to prevent breakage. Either the inner packagings or the outer packagings must have inner liners or bags of strong leakproof and puncture-resistant material impervious to the contents and completely surrounding the contents to prevent it from escaping from the package, irrespective of its position.

(2) In packagings intended to contain liquids consisting of semi-rigid plastic inner packagings of not more than 2.5 kg (5.5 pounds) net capacity each, individually enclosed in a sealed, leak-tight bag of strong puncture-resistant material. The sealed bags must be packed in wooden (4C1, 4C2), plywood (4D), reconstituted wood (4F), fiberboard (4G) or plastic (4H1, 4H2) boxes or in fiber (1G) or steel (1A2) drums, which are lined with leak-tight, puncture-resistant material. Bags and liner material must be chemically resistant to gallium.

(3) Cylinders and steel flasks with vaulted bottoms are also authorized.

(b) When it is necessary to transport gallium at low temperatures in order to maintain it in a completely solid state, the above packagings may be overpacked in a strong, water-resistant outer packaging which contains dry ice or other means of refrigeration. If a refrigerant is used, all of the above materials used in the packaging of gallium must be chemically and physically resistant to the refrigerant and must have impact resistance at the low temperatures of the refrigerant employed. If dry ice is used, the outer packaging must permit the release of carbon dioxide gas.

(c) Manufactured articles or apparatuses, each containing not more than 100 mg (0.0035 ounce) of gallium and packaged so that the quantity of gallium per package does not exceed 1 g (0.35 ounce) are not subject to the requirements of this subchapter.

45. In § 173.164, paragraphs (a)(1) through (a)(3) are revised and paragraph (a)(4) is added to read as follows:

**§ 173.164 Mercury (metallic and articles containing mercury).**

(a) \* \* \*

(1) In inner packagings of earthenware, glass or plastic containing not more than 3.5 kg (7.7 pounds) of mercury, or inner packagings which are glass ampoules containing not more than 0.5 kg (1.1 pounds) of mercury, or iron or steel quicksilver flasks containing not more than 35 kg (77 pounds) of mercury. The inner packagings or flasks must be packed in steel drums (1A2), steel jerricans (3A2), wooden boxes (4C1), (4C2), plywood boxes (4F), reconstituted wood boxes (4F), fiberboard boxes (4G), plastic boxes (4H2), plywood drums (1D) or fiber drums (1G).

(2) Packagings must meet the requirements of Part 178 of this subchapter at the Packing Group I performance level.

(3) When inner packagings of earthenware, glass or plastic are used,

they must be packed in the outer packaging with sufficient cushioning material to prevent breakage.

(4) Either the inner packagings or the outer packagings must have inner linings or bags of strong leakproof and puncture-resistant material impervious to mercury, completely surrounding the contents, so that the escape of mercury will be prevented irrespective of the position of the package.

\* \* \* \* \*

#### § 173.164 [Amended]

46. In addition, in § 173.164, in paragraph (c) introductory text, the wording "not more than 100 mg (0.0035 ounce)" is removed.

47. In § 173.166, in paragraph (c), the last sentence is revised to read as follows:

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

\* \* \* \* \*

(c) \* \* \* Marking the EX number or product code on the outside package is not required.

\* \* \* \* \*

#### § 173.166 [Amended]

48. In addition, in § 173.166, the following changes are made:

a. In paragraph (a), in the first sentence, the wording "a booster material and a gas generant" is removed and "a booster material, a gas generant and, in some cases, a pressure vessel (cylinder)" is added in its place.

b. In paragraph (b) introductory text, the wording "as Class 9 only" is removed and "as Class 9 (UN3268) or Division 2.2 (UN3353)" is added in its place.

c. In paragraph (b)(2), the wording "second revised edition, 1995" is removed.

d. In paragraph (b)(3)(ii), the wording "as Class 9" is removed and "as Class 9 or Division 2.2" is added in its place.

e. In paragraph (c), in the second sentence, the wording "to the inflator" is removed and "to the inflator, module" is added in its place.

f. In paragraph (f), in the first sentence, the wording "or NON-FLAMMABLE GAS" is added immediately following the wording "CLASS 9".

#### § 173.196 [Amended]

49. In § 173.196, paragraph (a)(1)(iii), in the first sentence, the wording "An absorbent material" is removed and "When the primary receptacle contains liquids, an absorbent material" is added in its place.

50. Section 173.220 is 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.

(a) *Applicability.* An internal combustion engine, self-propelled vehicle, mechanized equipment containing an internal combustion engine, or a battery powered vehicle or equipment is subject to the requirements of this subchapter when transported as cargo on a transport vehicle, vessel, or aircraft if—

(1) The engine or fuel tank contains a liquid or gaseous fuel. An engine may be considered as not containing fuel when the fuel tank, engine components, and fuel lines have been completely drained, sufficiently cleaned of residue, and purged of vapors to remove any potential hazard and the engine when held in any orientation will not release any liquid fuel;

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

(3) Except as provided in paragraph (d)(1) of this section, it contains other hazardous materials subject to the requirements of this subchapter.

(b) *Requirements.* Unless otherwise excepted in paragraph (b)(4) of this section, vehicles, engines and equipment are subject to the following requirements:

(1) *Flammable liquid fuel.* A fuel tank containing a flammable liquid fuel must be drained and securely closed, except that up to 500 ml (17 ounces) of residual fuel may remain in the tank, engine components, or fuel lines provided they are securely closed to prevent leakage of fuel during transportation. Self-propelled vehicles containing diesel fuel are excepted from the requirement to drain the fuel tanks, provided that sufficient ullage space has been left inside the tank to allow fuel expansion without leakage, and the tank caps are securely closed.

(2) *Flammable liquefied or compressed gas fuel.* Fuel tanks and fuel systems containing flammable liquefied or compressed gas fuel must be securely closed. For transportation by water, the requirements of § 176.78(k) and 176.905 of this subchapter apply. For transportation by air, the fuel tank and fuel system must be emptied and securely closed or must be removed, packaged and transported in accordance with the requirements of this subchapter.

(3) *Truck bodies or trailers on flat cars—flammable liquid or gas powered.* Truck bodies or trailers with automatic heating or refrigerating equipment of the flammable liquid type may be shipped with fuel tanks filled and equipment

operating or inoperative, when used for the transportation of other freight and loaded on flat cars as part of a joint rail and highway movement, provided the equipment and fuel supply conform to the requirements of § 177.834(l) of this subchapter.

(4) *Modal exceptions.* Quantities of flammable liquid fuel greater than 500 ml (17 ounces) may remain in self-propelled vehicles and mechanical equipment only under the following conditions:

(i) For transportation by motor vehicle or rail car, the fuel tanks must be securely closed.

(ii) For transportation by vessel, the shipment must conform to § 176.905 of this subchapter.

(iii) For transportation by aircraft designed or modified for vehicle ferry operations, the shipment must conform to § 175.305 of this subchapter.

(c) *Wet battery powered or installed.* Wet batteries must be securely installed and fastened in an upright position. Batteries must be protected against short circuits 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) *Other hazardous materials.* (1) Items of equipment containing hazardous materials, fire extinguishers, compressed gas accumulators, safety devices and other hazardous materials which are integral components of the motor vehicle, engine or mechanical equipment and are necessary for the operation of the vehicle, engine or equipment, or for the safety of its operator or passengers must be securely installed in the motor vehicle, engine or mechanical equipment. Such items are not otherwise subject to the requirements of this subchapter.

(2) Other hazardous materials must be packaged and transported in accordance with the requirements of this subchapter.

(e) *Exceptions.* Except as provided in paragraph (d)(2) of this section, shipments made under the provisions of this section—

(1) Are not subject to any other requirements of this subchapter, for transportation by motor vehicle or rail car; and

(2) Are not subject to the requirements of subparts D, E and F (marking, labeling and placarding, respectively) of part 172 of this subchapter or § 172.604 of this subchapter (emergency response telephone number) for transportation by vessel or aircraft. For transportation by



aircraft, all other applicable requirements of this subchapter, including shipping papers, emergency response information, notification of pilot-in-command, general packaging requirements, and the requirements specified in § 173.27 must be met. For transportation by vessel, additional exceptions are specified in § 176.905 of this subchapter.

51. Section 173.221 is revised to read as follows:

**§ 173.221 Polymeric beads, expandable and Plastic molding compound.**

(a) Non-bulk shipments of Polymeric beads (or granules), expandable, *evolving flammable vapor* and Plastic molding compound *in dough, sheet or extruded rope form, evolving flammable vapor* must be packed in: wooden (4C1 or 4C2), plywood (4D), fiberboard (4G), reconstituted wood (4F) boxes, plywood drums (1D) or fiber drums (1G) with sealed inner plastic liners; in vapor tight metal or plastic drums (1A1, 1A2, 1B1, 1B2, 1H1 or 1H2); or packed in non-specification packagings when transported in dedicated vehicles or freight containers. The packagings need not conform to the requirements for package testing in part 178 of this subchapter, but must be capable of containing any evolving gases from the contents during normal conditions of transportation.

(b) Bulk shipments of Polymeric beads (or granules), expandable, *evolving flammable vapor* or Plastic molding compounds *in dough, sheet or extruded rope, evolving flammable vapor* may be packed in non-specification bulk packagings. Except for transportation by highway and rail, bulk packagings must be capable of containing any gases evolving from the contents during normal conditions of transportation.

52. Section 173.222 is revised to read as follows:

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

Hazardous materials in machinery or apparatus are excepted from the specification packaging requirements of this subchapter when packaged according to this section. Hazardous materials in machinery or apparatus must be packaged in strong outer packagings, unless the receptacles containing the hazardous materials are afforded adequate protection by the construction of the machinery or apparatus. Each package must conform to the packaging requirements of subpart B of this part, except for the requirements in §§ 173.24(a)(1) and 173.27(e), and the following requirements:

(a) If the equipment, machinery or apparatus contains more than one hazardous material, the materials must not be capable of reacting dangerously together.

(b) The nature of the containment must be as follows—

(1) Damage to the receptacles containing the hazardous materials during transport is unlikely. However, in the event of damage to the receptacles containing the hazardous materials, no leakage of the hazardous materials from the equipment, machinery or apparatus is possible. A leakproof liner may be used to satisfy this requirement.

(2) Receptacles containing hazardous materials must be secured and cushioned so as to prevent their breakage or leakage and so as to control their movement within the equipment, machinery or apparatus during normal conditions of transportation. Cushioning material must not react dangerously with the content of the receptacles. Any leakage of the contents must not substantially impair the protective properties of the cushioning material.

(3) Receptacles for gases, their contents and filling densities must

conform to the applicable requirements of this subchapter, unless otherwise approved by the Associate Administrator for Hazardous Materials Safety.

(c) For transportation by aircraft, the total net quantity of hazardous materials contained in one item of equipment, machinery or apparatus must not exceed the following:

(1) 1 kg (2.2 pounds) in the case of solids;

(2) 0.5 L (0.3 gallons) in the case of liquids;

(3) 0.5 kg (1.1 pounds) in the case of Division 2.2 gases; and

(4) A total quantity of not more than the aggregate of that permitted in paragraphs (c)(1) through (c)(3) of this section, for each category of material in the package, when a package contains hazardous materials in two or more of the categories in paragraphs (c)(1) through (c)(3) of this section and is offered for transportation by aircraft.

(d) 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.

**§ 173.224 [Amended]**

53. In § 173.224, in the introductory text of paragraph (c)(3), the word “product” is added immediately before the word “evaluation”.

54. In § 173.225, in paragraph (b), in the Organic Peroxides Table, entries are removed or added in the appropriate alphabetical order, to read as follows:

**§ 173.225 Packaging requirements and other provisions for organic peroxides.**

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

ORGANIC PEROXIDE TABLE

Technical name	ID number	Concentration (mass %)	Diluent Mass (%)			Water (mass %)	Packing method	Temperature (°C)		Note
			A	B	I			Control	Emergency	
(1)	(2)	(3)	(4a)	(4b)	(4c)	(5)	(6)	(7a)	(7b)	(8)
[REMOVE:]										
Dibenzoyl peroxide [as a paste]	Exempt	≤50	≥14			≥18	Exempt			
[ADD:]										
Isopropyl sec-butyl peroxydicarbonate [and] Di-sec-butyl peroxydi-carbonate [and] Di-isopropyl peroxydicarbonate.	UN3115	≤32 + ≤15-18 + ≤12-15	≥38				OP7	-20	-10	

## ORGANIC PEROXIDE TABLE—Continued

Technical name	ID number	Concentration (mass %)	Diluent Mass (%)			Water (mass %)	Packing method	Temperature (°C)		Note
			A	B	I			Control	Emergency	
(1)	(2)	(3)	(4a)	(4b)	(4c)	(5)	(6)	(7a)	(7b)	(8)
*	*	*	*	*	*	*	*	*	*	*

**§ 173.225 [Amended]**

55. In addition, in § 173.225, in paragraph (b), in the Organic Peroxides Table, the following changes are made:

a. For the entry, "tert-Butyl cumyl peroxide" (UN3106), in Column (4b), the reference "≥58" is removed and in Column (4c), "≥58" is added.

b. For the entry, "tert-Butyl hydroperoxide" (UN3105), in Column (7b), the reference "4, 13" is removed and in Column (8), "4, 13" is added.

c. For the entry, "tert-Butyl monoperoxymaleate [as a paste]" (UN3108), in Column (3), the reference "≥52" is revised to read "≤52".

d. For the entry, "tert-Butyl monoperoxymaleate [as a paste]" (UN3110), in Column (3), the reference "≥42" is revised to read "≤42".

e. For the entry, "tert-Butyl peroxyacetate" (UN3109), in Column (3), the reference "≥32" is revised to read "≤32".

f. For the entry, "tert-Butyl peroxyacetate" (UN3119), in Column (3), the reference "≥32" is revised to read "≤32".

g. For the entry, "tert-Butyl peroxyacetate" (UN3109), in Column (3), the reference "≥22" is revised to read "≤22".

h. For the entry, "tert-Butyl peroxybenzoate" (UN3103), in Column (4a), the reference "≥23" is revised to read "≤23".

i. For the entry, "tert-Butyl peroxybenzoate" (UN3105), in Column (3), the reference "<52-77" is revised to read ">52-77".

j. For the entry, "tert-Butyl peroxy-2-ethylhexanoate" (UN3117), in Column (3), the reference "≤52" is revised to read ">32-52".

k. For the first entry for, "tert-Butyl peroxy-2-ethylhexanoate" (UN3119), in Column (6), the reference "1BC" is revised to read "IBC".

l. For the entry, "Cumyl hydroperoxide" (UN3109), in Column (3), the reference "≥90" is revised to read "≤90".

m. For the entry, "1,1-Di-(tert-butylperoxy)cyclohexane" (UN3103), in Column (4a), the reference "≤20" is revised to read "≥20".

n. For the entry, "Di-n-butyl peroxydicarbonate" (UN3115), in Column (7b), the reference "5" is revised to read "-5".

o. For the entry, "Diethyl peroxydicarbonate" (UN3115), in Column (7a), the reference ">10" is revised to read "-10".

p. For the entry, "2,5-Dimethyl-2,5-di-(tert-butylperoxy)hexyne-3" (UN3103), in Column (4a), the reference "≥14" is added.

q. For the entry, "2,5-Dimethyl-2,5-dihydroperoxyhexane" (UN3104), Column (7a), the reference "OP6" is removed and in Column (6), "OP7" is added.

r. For the entry, "1,1-Dimethyl-3-hydroxybutylperoxyneheptanoate" (UN3117), in Column (4b), the reference "≥48" would be removed and in Column (4a), "≥48" is added.

s. For the entry, "3,3,6,6,9,9-Hexamethyl-1,2,4,5-tetraoxacyclononane" (UN3106), in Column (4b), the reference "≥48" is removed; in Column (4c), "≥48" is added; in Column (5), the reference "OP7" is removed; and, in Column (6) "OP7" is added.

t. For the entry, "Peroxyacetic acid, type F, stabilized" (UN3109), in Column (8), the reference "13, 20" is removed and "7, 13, 20" is added in its place.

u. For the entry, "Pinanyl hydroperoxide" (UN3105), in Column (3), the reference "≥56-100" is revised to read "56-100".

56. In § 173.225, in paragraph (c)(2), the word "product" is added immediately before the word "evaluation".

57. In § 173.243, in paragraph (e)(2), the period at the end of the paragraph is revised to read "; or" and a new paragraph (e)(3) is added to read as follows:

**§ 173.243 Bulk packaging for certain high hazard liquids and dual hazard materials which pose a moderate hazard.**

\* \* \* \* \*

(e) \* \* \*

(3) The subsidiary hazard is Class 8, Packaging Group, III.

58. In § 173.301, paragraph (i) is revised to read as follows:

**§ 173.301 General requirements for shipment of compressed gases in cylinders and spherical pressure vessels.**

\* \* \* \* \*

(i) *Foreign cylinders in domestic use.*

(1) Except as provided in this section and § 171.12(c) of this subchapter, a charged cylinder manufactured outside the United States may not be offered for transportation to, from, or within the United States unless it has been manufactured, inspected, and tested in accordance with the applicable DOT specification set forth in part 178 of this subchapter.

(2) Effective October 1, 1999, a CTC specification cylinder manufactured, originally marked and approved in accordance with the Canadian Transport Commission (CTC) regulations and in full conformance with the Canadian Transport of Dangerous Goods (TDG) Regulations is authorized for the transportation of a hazardous material to, from or within the United States under the following conditions:

(i) The CTC specification corresponds with a DOT specification and the cylinder markings are the same as those specified in this subchapter except that they were originally marked with the letters "CTC in place of DOT;

(ii) The cylinder has been requalified under a program authorized by the Canadian TDG regulations or requalified in accordance with the requirements in § 173.34(e) within the prescribed requalification period provided for the corresponding DOT specification;

(iii) When the regulations authorize a cylinder for a specific hazardous material with a specification marking prefix of "DOT, a cylinder marked "CTC which otherwise bears the same markings that would be required of the specified "DOT" cylinder may be used; and

(iv) Transport of the cylinder and the material it contains is in all other respects in conformance with the requirements of this subchapter (e.g. valve protection, filling requirements, operational requirements, etc.).

\* \* \* \* \*

59. In § 173.306, new paragraphs (f)(4) and (f)(5) are added to read as follows:

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

\* \* \* \* \*

(f) \* \* \*

(4) Accumulators intended to function as shock absorbers, struts, gas springs, pneumatic springs or other impact or energy-absorbing devices are not subject to the requirements of this subchapter provided each:

(i) Has a gas space capacity not exceeding 1.6 liters and a charge pressure not exceeding 280 bar, where the product of the capacity expressed in liters and charge pressure expressed in bars does not exceed 80 (for example, 0.5 liter gas space and 160 bar charge pressure);

(ii) Has a minimum burst pressure of 4 times the charge pressure at 20°C for products not exceeding 0.5 liter gas space capacity and 5 times the charge pressure for products greater than 0.5 liter gas space capacity;

(iii) Design type has been subjected to a fire test demonstrating that the article relieves its pressure by means of a fire degradable seal or other pressure relief device, such that the article will not fragment and that the article does not rocket; and

(iv) Accumulators must be manufactured under a written quality assurance program which monitors parameters controlling burst strength, burst mode and performance in a fire situation as specified in paragraphs (f)(4)(i) through (f)(4)(iii) of this section. A copy of the quality assurance program must be maintained at each facility at which the accumulators are manufactured.

(5) Accumulators not conforming to the provisions of paragraphs (f)(1) through (f)(4) of this section, may only be transported subject to the approval of the Associate Administrator for Hazardous Materials Safety.

\* \* \* \* \*

**§ 173.306 [Amended]**

60. In addition, in § 173.306, paragraph (d) is removed and reserved.

**PART 174—CARRIAGE BY RAIL**

61. The authority citation for Part 174 continues to read as follows:

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

62. In § 174.81, a new paragraph (g)(3)(vi) is added to read as follows:

**§ 174.81 Segregation of hazardous materials.**

\* \* \* \* \*

(g) \* \* \*

(3) \* \* \*

(vi) “6” means explosive articles in compatibility group G, other than

fireworks and those requiring special stowage, may be stowed with articles of compatibility groups C, D and E, provided no explosive substances are carried in the same rail car.

\* \* \* \* \*

**§ 174.81 [Amended]**

63. In addition, in § 174.81, in the paragraph (f) Compatibility Table for Class 1 (Explosive) Materials, the following changes are made:

a. For the entry, “C”, under the Column (1) heading, “Compatibility Group”, in Column G, the letter “X” is revised to read “6”.

b. For the entry “D”, under the Column (1) heading, “Compatibility Group”, in Column G, the letter “X” is revised to read “6”.

c. For the entry “E”, under the Column (1) heading, “Compatibility Group”, in Column G, the letter “X” is revised to read “6”.

d. For the entry “G”, under the Column (1) heading, “Compatibility Group”, in Columns “C”, “D”, and “E”, the letter “X” is revised to read “6” each place it appears.

64. Section 174.680 is revised to read as follows:

**§ 174.680 Division 6.1 (poisonous materials with foodstuffs.**

(a) Except as provided in paragraph (b) of this section, a carrier may not transport any package bearing a POISON or POISON INHALATION HAZARD label in the same car with any material marked as, or known to be, a foodstuff, feed or any other edible material intended for consumption by humans or animals.

(b) A carrier must separate any package bearing a POISON label displaying the text “PG III,” or bearing a “PG III” mark adjacent to the POISON label, from materials marked as or known to be foodstuffs, feed or any other edible materials intended for consumption by humans or animals, as required in § 174.81(e)(3) for classes identified with the letter “O” in the Segregation Table for Hazardous Materials.

**PART 175—CARRIAGE BY AIRCRAFT**

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

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

**§ 175.630 [Amended]**

66. In § 175.630, in paragraph (a), the wording “KEEP AWAY FROM FOOD,” is removed.

**PART 176—CARRIAGE BY VESSEL**

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

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

68. In § 176.76, a new paragraph (i) is added to read as follows:

**§ 176.76 Transport vehicles, freight containers, and portable tanks containing hazardous materials.**

\* \* \* \* \*

(i) Containers packed or loaded with flammable gases or liquids having a flashpoint of 23° C or less and carried on deck must be stowed “away from” possible sources of ignition.

69. In § 176.83, paragraphs (a)(1), (a)(3) and (a)(8) are revised and a new paragraph (a)(10) is added to read as follows:

**§ 176.83 Segregation.**

(a) \* \* \* (1) The requirements of this section apply to all cargo spaces on deck or under deck of all types of vessels, and to all cargo transport units.

\* \* \* \* \*

(3) The general requirements for segregation between the various classes of dangerous goods are shown in the segregation table. In addition to these general requirements, there may be a need to segregate a particular material from other materials which would contribute to its hazard. Such segregation requirements are indicated by code numbers in Column 10B of the § 172.101 Table.

\* \* \* \* \*

(8) Notwithstanding the requirements of paragraphs (a)(6) and (a)(7) of this section, hazardous materials of the same class may be stowed together without regard to segregation required by secondary hazards (subsidiary risk label(s)), provided the substances do not react dangerously with each other and cause:

(i) Combustion and/or evolution of considerable heat;

(ii) Evolution of flammable, toxic or asphyxiant gases;

(iii) The formation of corrosive substances; or

(iv) the formation of unstable substances.

\* \* \* \* \*

(10) Where the code in column (10B) of the § 172.101 Table specifies that “Segregation as for. . .” applies, the segregation requirements applicable to that class in the § 176.83(b) General Segregation Table must be applied. However, for the purposes of paragraph (a)(8) of this section, which permits substances of the same class to be

stowed together provided they do not react dangerously with each other, the segregation requirements of the class as represented by the primary hazard class in the § 172.101 Table entry must be applied.

\* \* \* \* \*

§ 176.83 [Amended]

70. In addition, in § 176.83, in the paragraph (g)(3) Table, for the segregation requirement "1. Away From", for the entries "Fore and aft." and "Athwartships.", under the Column heading "Open versus open", under Column "On deck", the wording "No restriction" is revised to read "At least 3 meters" in both places it appears.

71. In § 176.600, the section heading and paragraphs (a) and (c) are revised to read as follows:

§ 176.600 General stowage requirements.

(a) Each package required to have a POISON GAS, POISON INHALATION HAZARD, or POISON label, being transported on a vessel, must be stowed clear of living quarters and any ventilation ducts serving living quarters and separated from foodstuffs, except when the hazardous materials and the foodstuffs are in different closed transport units.

\* \* \* \* \*

(c) Each package bearing a POISON label displaying the text "PG III" or bearing a "PG III" mark adjacent to the poison label must be stowed away from foodstuffs.

\* \* \* \* \*

PART 177—CARRIAGE BY PUBLIC HIGHWAY

72. The authority citation for Part 177 continues to read as follows:

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

73. In § 177.841, paragraph (e)(3) is revised to read as follows:

§ 177.841 Division 6.1 (poisonous) and Division 2.3 (poisonous gas) materials.

\* \* \* \* \*

(e) \* \* \*

(3) Bearing a POISON label displaying the text "PG III," or bearing a "PG III" mark adjacent to the POISON label, with materials marked as, or known to be, foodstuffs, feed or any other edible material intended for consumption by humans or animals, unless the package containing the Division 6.1, Packing Group III material is separated in a manner that, in the event of leakage from packages under conditions normally incident to transportation, commingling of hazardous materials

with foodstuffs, feed or any other edible material would not occur.

§ 177.841 [Amended]

74. In addition, in § 177.841, in the introductory text of paragraph (e)(1), the wording "Bearing or required to bear a POISON" is removed and "Except as provided in paragraph (e)(3) of this section, bearing or required to bear a POISON" is added in its place.

75. In § 177.848, a new paragraph (g)(3)(vi) is added to read as follows:

§ 177.848 Segregation of hazardous materials.

\* \* \* \* \*

(g) \* \* \*

(3) \* \* \*

(vi) "6" means explosive articles in compatibility group G, other than fireworks and those requiring special stowage, may be stowed with articles of compatibility groups C, D and E, provided no explosive substances are carried in the same vehicle.

\* \* \* \* \*

§ 177.848 [Amended]

76. In addition, in § 177.848, in the paragraph (f) Compatibility Table for Class 1 (Explosive) Materials, the following changes are made:

a. For the entry "C", under the Column (1) heading, "Compatibility Group", in Column G, the letter "X" is revised to read "6".

b. For the entry "D", under the Column (1) heading, "Compatibility Group", in Column G, the letter "X" is revised to read "6".

c. For entry "E", under the Column (1) heading, "Compatibility Group", in Column G, the letter "X" is revised to read "6".

d. For the entry "G", under the Column (1) heading, "Compatibility Group", in Columns "C", "D" and "E", the letter "X" is revised to read "6" each place it appears.

PART 178—SPECIFICATIONS FOR PACKAGINGS

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

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

§ 178.270-3 [Amended]

78. In § 178.270-3, in paragraph (e), in the second sentence, the reference "ISO 82-1974(e)" is removed and "ISO 82" is added in its place.

§ 178.509 [Amended]

79. In § 178.509, in paragraph (b)(1), in the second sentence, the wording "unless approved by the Associate Administrator for Hazardous Materials

Safety" is added immediately following the words "may be used".

80. In § 178.703, paragraph (b)(6)(ii) is revised to read as follows:

§ 178.703 Marking of intermediate bulk containers.

\* \* \* \* \*

(b) \* \* \*

(6) \* \* \*

(ii) When a composite intermediate bulk container is designed in such a manner that the outer casing is intended to be dismantled for transport when empty (such as, for the return of the intermediate bulk container for reuse to the original consignor), each of the parts intended to be detached when so dismantled must be marked with the month and year of manufacture and the name or symbol of the manufacturer.

81. In § 178.813, in paragraph (b), a sentence is added to the end of the paragraph to read as follows:

§ 178.813 Leakproofness test.

\* \* \* \* \*

(b) \* \* \* The inner receptacle of a composite intermediate bulk container may be tested without the outer packaging provided the test results are not affected.

\* \* \* \* \*

PART 180—CONTINUING QUALIFICATION AND MAINTENANCE OF PACKAGINGS

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

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

83. in § 180.352, the section heading and paragraphs (b)(1), (b)(2), (b)(3) introductory text and (c) heading and introductory text are revised, paragraphs (d) and (e) are redesignated as paragraphs (e) and (f), respectively, and new paragraph (d) is added to read as follows:

§ 180.352 Requirements for retest and inspection of intermediate bulk containers (IBCs).

\* \* \* \* \*

(b) \* \* \*

(1) Each IBC intended to contain liquids or solids that are loaded or discharged under pressure must be tested in accordance with the leakproofness test prescribed in § 178.813 of this subchapter every 2.5 years, starting from the date of manufacture or the date of a repair conforming to paragraph (d)(1) of this section.

(2) An external visual inspection must be conducted initially after production and every 2.5 years starting from the

date of manufacture or the date of a repair conforming to paragraph (d)(1) of this section to ensure that:

(i) The IBC is marked in accordance with requirements in § 178.703 of this subchapter. Missing or damaged markings, or markings difficult to read must be restored or returned to original condition.

(ii) Service equipment is fully functional and free from damage which may cause failure. Missing, broken, or damaged parts must be repaired or replaced.

(iii) The IBC is capable of withstanding the applicable design qualification tests. The IBC must be externally inspected for cracks, warpage, corrosion or any other damage which might render the IBC unsafe for transportation. An IBC found with such defects must be removed from service or repaired in accordance with paragraph (d) of this section. The inner receptacle of a composite IBC must be removed from the outer IBC body for inspection unless the inner receptacle is bonded to the outer body or unless the outer body is constructed in such a way (e.g., a welded or riveted cage) that removal of the inner receptacle is not possible without impairing the integrity of the outer body. Defective inner receptacles must be replaced in accordance with paragraph (d) of this section or the entire IBC must be removed from service. For metal IBCs, thermal

insulation must be removed to the extent necessary for proper examination of the IBC body.

(3) Each metal, rigid plastic and composite IBC must be internally inspected at least every five years to ensure that the IBC is free from damage and to ensure that the IBC is capable of withstanding the applicable design qualification tests.

\* \* \* \* \*

(c) *Visual inspection for flexible, fiberboard, or wooden IBCs.* Each IBC must be visually inspected prior to first use and permitted reuse, by the person who places hazardous materials in the IBC, to ensure that:

\* \* \* \* \*

(d) *Requirements applicable to repair of IBCs.* (1) Except for flexible and fiberboard IBCs and the bodies of rigid plastic and composite IBCs, damaged IBCs may be repaired and the inner receptacles of composite packagings may be replaced and returned to service provided:

(i) The repaired IBC conforms to the original design type and is capable of withstanding the applicable design qualification tests;

(ii) An IBC intended to contain liquids or solids that are loaded or discharged under pressure is subjected to a leakproofness test as specified in § 178.813 of this subchapter and is marked with the date of the test; and

(iii) The IBC is subjected to the internal and external inspection requirements as specified in paragraph (b) of this section.

(2) Except for flexible and fiberboard IBCs, the structural equipment of an IBC may be repaired and returned to service provided:

(i) The repaired IBC conforms to the original design type and is capable of withstanding the applicable design qualification tests; and

(ii) The IBC is subjected to the internal and external inspection requirements as specified in paragraph (b) of this section.

(3) Service equipment may be replaced provided:

(i) The repaired IBC conforms to the original design type and is capable of withstanding the applicable design qualification tests;

(ii) The IBC is subjected to the external visual inspection requirements as specified in paragraph (b) of this section; and

(iii) The proper functioning and leak tightness of the service equipment, if applicable, is verified.

\* \* \* \* \*

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**Stephen D. Van Beek,**  
*Acting Administrator.*

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