



CHEMICAL MANUFACTURERS ASSOCIATION

September 29, 1992

Dr. Charles Ke
Chief, Science Group
Office of Hazardous Materials Technology
U.S. Department of Transportation
400 Seventh St., S.W.
Washington, D.C. 20590-0001

Dear Dr. Ke:

Thank you for meeting with representatives of the CMA Vinyl Chloride Panel on August 12, 1992, to discuss the Panel's request to allow the vinyl chloride industry to use either "vinyl chloride" or "vinyl chloride, inhibited," as appropriate, on the shipping label. The basis for the Panel's request was described in my January 16, 1992, letter to Mr. Edward Mazzullo of the DOT Office of Hazardous Materials Standards. A copy of the January 16, 1992, letter is enclosed for your ready reference (Attachment 1). At our August 12, 1992 meeting, you requested additional information on VCM shipping practices in Europe, Asia and the Pacific Rim. I contacted our Panel member companies, and now have received the requested information. This information is described below.

VCM domestically and in foreign countries is shipped mainly by railcars, pipelines or marine vessels. Most domestic VCM shipments by railcars and pipelines are uninhibited, i.e., no chemical inhibitor is added. Export marine shipments are either chemically inhibited or uninhibited. There are three classes of vessels that carry VCM. These are fully refrigerated, semi-refrigerated, and pressure vessels. The fully refrigerated ships operate at temperatures of -15°C with relief valve settings of 2 to 3 psig. Semi-refrigerated ships can load VCM at ambient temperatures but normal operation is also to cool the VCM to the customer's requirements or to fully refrigerated conditions. The tanks are rated for 45 to 100 psig. Pressure vessels operate at ambient temperature and have tank ratings of 150 to 200 psig. Auto polymerization in the refrigerated or semi-refrigerated class of vessels is unlikely due to the low product temperatures maintained. Pressure vessels are very similar to tank cars and carry the same low risk of auto polymerization as tank cars.

Vessel shipments of VCM from the US do not require an inhibitor as long as the tanks are purged with inert gas until the oxygen content is below 0.1%, and the tanks are carried under positive pressure. The attached IMO regulations govern the VCM shipping practices (Attachment 2). US Coast Guard regulations are not clear, but the Coast Guard is aware of both inhibited and uninhibited VCM shipments from the US.

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While the risk of polymerization is remote and the IMO regulations do not specifically require VCM to be inhibited, the actual practice is mixed. Most shipping contracts call for "properly inhibited" VCM. The term "properly inhibited" has never been defined. U.S. shipments to the Far East and Europe are almost always inhibited. Most shipments to Mexico are not inhibited. A typical voyage to the Far East from the US is 30 days while the time to Mexico is 3 to 5 days.

In Europe, when Far East shipments are made in large ships, they are inhibited with Hydroquinone. Generally, the ships have other products in the same hold previous to VCM and have too high an oxygen concentration, probably greater than 1000 ppm oxygen by volume. It is too expensive to purge the large ship tanks to a lower specification suitable to prevent polymerization, and, therefore, the monomer is inhibited by chemical addition. The distance has some bearing whether to inhibit VCM, but the decision to inhibit or not probably is made based on cost to lower the oxygen content of huge ship tanks to below 0.1%.

Each country's handling of vinyl chloride monomer is different. One place in Europe does not inhibit while in storage and during transportation to the polymer plants. This is due to the dedicated service of pipelines, etc. Some companies in Japan inhibit monomer going into storage and to polymer plants and small shuttle ships, where another Japanese company does not inhibit monomer handled on land. The Koreans do not inhibit monomer domestically. The Saudis do inhibit their VCM storages.

As we discussed over the phone about two weeks ago, the domestic VCM name plate capacity is about 12 billion pounds, and about 6 billion pounds are shipped internally by railcars. The two other methods of transportation of vinyl chloride are by pipelines or marine vessel.

In conclusion, the CMA Vinyl Chloride Panel requests that the U.S. DOT add "Vinyl Chloride" to the 49 CFR 172.102 table as a separate shipping name for those shipments that do not contain a chemical inhibitor.

If you have any questions concerning the information in this letter, please call me at (202) 887-1192.

Sincerely,



Hasmukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

Enclosure

cc: George Cushmac
Vinyl Chloride Panel

CMA 111111



CHEMICAL MANUFACTURERS ASSOCIATION

January 16, 1992

Mr. Edward Mazzullo
DHM-10
Director, Office of Hazardous Materials Standards
U.S. Department of Transportation
400 7th St, SW
Washington, D.C. 20590-0001

Dear Mr. Mazzullo:

The Chemical Manufacturers Association Vinyl Chloride Panel hereby requests that the Department of Transportation reconsider the shipping label name for vinyl chloride containers. The DOT Hazardous Materials Regulations (HMR: 49 CFR Parts 171-180) that have been converted to United Nations Standards have changed the proper shipping name of vinyl chloride from "Vinyl Chloride" to "Vinyl Chloride, inhibited." This change has concerned vinyl chloride producers because an inhibitor is not added to the monomer for purposes of domestic shipments and on some international shipments. Industry recognizes inhibiting vinyl chloride as the addition of a chemical, such as hydroquinone, that would prevent self polymerization. Removing oxygen to low parts per million quantities or cooling the liquid monomer is considered an inhibiting step by Dr. Charles Ke of DOT. These processes are understood to be a requirement for storing and shipping vinyl chloride and not an inhibiting step for the monomer as Dr. Ke has suggested. Labeling containers such as tank cars with the inhibitor statement will create confusion for all handlers of this product.

There has not been a problem with vinyl chloride self polymerizing while in a shipping container and in route to shipping locations. For this reason, most producers and shippers do not inhibit vinyl chloride for domestic tank car, truck, and water transportation. The chemical inhibitor would interfere with the conversion of vinyl chloride to a polymer.

The addition of "Inhibited" as part of the vinyl chloride proper shipping name would be an incorrect marking of most packages shipped today. Markings on all bulk transportation equipment, non-bulk packages and shipping documents would require the addition of the "Inhibited" description.

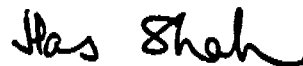
The Vinyl Chloride Panel, therefore, petitions for reconsideration to add "Vinyl Chloride" as a separate proper shipping name for those shipments that do not contain a chemical inhibitor. Placing a symbol

Mr. Edward Mazzullo
January 16, 1992
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in column 1 of 49 CFR 172.102 table representing transportation in North America is recommended. This would not change vinyl chloride's hazard class or the response to hazardous materials incidents by emergency responders.

If you have any questions or need additional information, please contact me at (202) 887-1192.

Sincerely,



Hasnukh C. Shah, Ph.D.
Manager, Vinyl Chloride Panel

cc: Vinyl Chloride Panel

CMA 111113

CLASS 2 - Gases

Sea

PROPERTIES

- 1 As stated in the General Introduction to this Code in respect of class 2, it is difficult to reconcile the various main systems of regulation; definitions in this class are, therefore, of a general nature to cover all such systems. Moreover, since it has not been found possible to reconcile the two main systems of regulation in respect of differentiation between a liquefied gas exerting a low pressure at a certain temperature and a flammable liquid, this criterion has been omitted; both methods of differentiation are recognized.
- 2 This class comprises:
 - 1 Permanent gases
Gases which cannot be liquefied at ambient temperatures;
 - 2 Liquefied gases
Gases which can become liquid under pressure at ambient temperatures;
 - 3 Dissolved gases
Gases dissolved under pressure in a solvent, which may be absorbed in a porous material;
 - 4 Deeply refrigerated permanent gases, e.g. liquid air, oxygen.
- 3 Gases are normally carried under pressure varying from high pressure in the case of compressed permanent gases to low pressure in the case of deeply refrigerated gases.
- 4 According to their chemical properties or physiological effects, which may vary widely, gases may be:
 - flammable
 - non-flammable
 - poisonous
 - supporters of combustion
 - corrosive
 or may possess two or more of these properties simultaneously.
- 4.1 Some gases are chemically and physiologically inert. Such gases as well as other gases, normally accepted as non-toxic, will nevertheless be suffocating in high concentrations. Additionally, a number of gases have been identified as harmful to the marine environment (MARINE POLLUTANTS), and this has been indicated in the individual schedules, where appropriate.
- 4.2 Many gases of this class have narcotic effects which may occur at comparatively low concentrations, or may involve highly poisonous gases when involved in a fire.
- 4.3 All gases which are heavier than air will present a potential danger if allowed to accumulate in the bottom of cargo spaces.
- 4.4 Identification of gases according to hazard
- 4.4.1 For storage and segregation purposes, class 2 is subdivided further according to the hazards presented by gases during transportation, namely:

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CLASS 2 - Gases

- 1 Class 2.1 - Flammable gases;
- 2 Class 2.2 - Non-flammable gases;
- 3 Class 2.3 - Poisonous gases.

1.4.4.2

In order to more accurately convey the hazards presented by gases, the information required by regulation 5 of part A of chapter VII of the International Convention for the Safety of Life at Sea 1974, as amended, should be supplemented to include an additional description, as necessary, of these hazards, i.e.:

- 1 Flammable gas (2.1);
- 2 Non-flammable gas (2.2);
- 3 Poisonous gas (2.3).

1.5

The characteristic properties, packing and storage provisions are given in the individual schedule for each gas. Properties of each gas include an indication of its mass in relation to air. The figures in brackets give the density relative to air.

Gases are described as:

- 1 "lighter than air" when the vapour density is down to half that of air;
- 2 "much lighter than air" when the vapour density is less than half that of air;
- 3 "heavier than air" when the density is up to twice that of air;
- 4 "much heavier than air" when the vapour density is more than twice that of air.

1.6

Some gases in this class, under conditions liable to transport, are liable to polymerize spontaneously or react with themselves so as to cause dangerous liberation of heat or gas, possibly resulting in rupture of the receptacle. These gases should not be transported unless they are properly stabilized; this is indicated in the proper shipping name.

1.7

Refrigerant gases

Because of the wide variety of trade names employed in respect of these gases (e.g. Freon, Arcton, Isocron, Folgan, etc.), the proper shipping name should normally be used for positive identification. In view of the widely accepted use of the letter "R" followed by an identifying number for these gases, the appropriate references have been quoted as a guide on the schedules.

2. PACKING

2.1

This class includes gases carried in the compressed state, liquefied state or dissolved under pressure which are under pressure and require special containment systems (pressure vessels).

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Sea

Chapter XVII

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for vapour discharge unloading

7.2.4(b) should be used.

which readily form dangerous
lowed to form stagnant pockets
ther by:

in 7.2.4(b) with the condenser

ned system described in 7.2.4(a)
act system described in 7.2.4(b)
argo tank, and designing the con-
tes in which liquid could collect
possible inhibited liquid should
a.

of such products with a ballast
d be removed prior to the ballast
tween such consecutive cargoes
ghly drained and purged before
carried out using either inert gas
atible. Practical steps should be
do not accumulate in the ship's

all butt welded joints in cargo
ed.

17.7 Bow or stern loading and discharge lines

Bow or stern loading and discharging lines should not be led past accommodation, service or control station spaces on Type IG ships. Bow and stern loading and discharging lines installed on Type IIG/IIPG ships should not be used for the transfer of toxic cargoes, unless specifically approved by the Administration.

17.8 Exclusion of air from vapour spaces

Air should be removed from the cargo tanks and associated piping before loading and then subsequently excluded by:

- Introducing inert gas to maintain a positive pressure. Storage or production capacity of the inert gas should be sufficient to meet normal operating requirements and relief valve leakage. The oxygen content of inert gas should at no time be greater than 0.2 per cent by volume; or
- control of cargo temperature such that a positive pressure is maintained at all times.

17.9 Moisture control

For gases which are non-flammable and may become corrosive or react dangerously with water, moisture control is required to ensure that cargo tanks are dry before loading and that during discharge, dry air or cargo vapour is introduced to prevent negative pressures. For the purposes of this paragraph, dry air is air which has a dewpoint of -45°C or below at atmospheric pressure.

17.10 Inhibition

Care should be taken to ensure that the cargo is sufficiently inhibited to prevent polymerization at all times during the voyage. Ships should be provided with a certificate from the manufacturer stating:

- name and amount of inhibitor added;
- date inhibitor was added and the normally expected duration of its effectiveness;
- any temperature limitations affecting the inhibitor;
- the action to be taken should the length of the voyage exceed the effective lifetime of the inhibitors.

17.11 Permanently installed toxic gas detectors

17.11.1 Gas sampling lines should not be led into or through gas-safe spaces. Alarms referred to in 13.6.7 should be activated when the vapour concentration reaches the threshold limiting value.

17.11.2 The alternative of using portable equipment in accordance with 13.6.9 should not be permitted.

1140

Sea

Chapter XVII

with a chlorine absorbing plant or piping system and the cargo should be capable of neutralizing total cargo capacity at a reason-

go tanks, vapours should not be

d be provided capable of monitoring of at least 1 ppm by volume, tested;

go hold spaces;

ry relief valves;

absorbing plant;

ion systems for the accommodation machinery spaces;

nd, in the middle and at the aft. Only required to be used during emergency operations.)⁴¹

ould be provided with audible signal of 5 ppm.

itted with a high pressure alarm sure equal to 10.5 kPa/cm².

ven in 17.2 the following require-

1 by 17.2.4 should be easily and open deck and accommodation being rapidly closed gas-tight. re deck and the remainder of the y means of an air-lock. The space accommodate the entire crew of h a source of uncontaminated air n four hours. One of the decon- d by 17.2.2 should be located &

ary equipment for filling the air-

equipment should be carried in paragraph (i).

.4(b) do not apply when it is

(iii) The chlorine content of the gas in the vapour space of the cargo tank after loading should be greater than 80 per cent by volume.

17.12.6 Vinyl chloride

In case polymerization of vinyl chloride is prevented by addition of an inhibitor, 17.10 is applicable. In case no or insufficient inhibitor has been added, any inert gas used for the purposes of 17.8 should contain not more oxygen than 0.1 per cent. Before loading is started, inert gas samples from the tanks and piping should be analysed. When vinyl chloride is carried, a positive pressure should always be maintained in the tanks, also during ballast voyages between successive cargoes.

17.12.7 Diethyl ether/vinyl ethyl ether⁴²

- (a) The cargo should be discharged only by deepwell pumps or by hydraulically operated submerged pumps. These pumps should be of a type designed to avoid liquid pressure against the shaft gland.
- (b) Inert gas displacement may be used for discharging cargo from independent tanks type C provided the cargo system is designed for the expected pressure.

17.12.8 Propylene oxide and mixtures of ethylene oxide/propylene oxide with ethylene oxide content not more than 30 per cent by weight⁴³

- (a) Products transported under the provisions of this section should be acetylene free.
- (b) For the purposes of this section the term "independent" means that a piping system or venting system, for example, is in no way connected to another system and that there are no means available for the potential connexion to other systems.
- (c) (i) Unless cargo tanks are properly cleaned, these products should not be carried in tanks which have contained as one of the three previous cargoes any product known to catalyse polymerization, such as:
 - ammonia, anhydrous and ammonia solutions;
 - amines and amine solutions;
 - oxidizing substances (e.g. chlorine).
- (ii) Before loading, tanks should be thoroughly and effectively cleaned to remove all traces of previous cargoes from tanks and associated pipework, except where the immediate prior cargo has been propylene oxide or ethylene oxide/propylene oxide mixtures. Particular care should be taken in the case of ammonia in tanks made of steel other than stainless steel.
- (iii) In all cases, the effectiveness of cleaning procedures for tanks and associated pipework should be checked by suitable testing or inspection to ascertain that no traces of acidic or alkaline materials remain that might create a hazardous situation in the presence of these products.

ADR Rego(?) and RID will
be similar. So applicable to
Road and Rail.

CLASS 2
GASES: COMPRESSED, LIQUEFIED OR DISSOLVED
UNDER PRESSURE

1. LIST OF SUBSTANCES

2200

(1) Among the substances and articles covered by the title of Class 2, only those listed in marginal 2201 are to be accepted for carriage, and then only subject to the requirements of this Annex and to the provisions of Annex B. These substances and articles to be accepted for carriage under certain conditions are to be considered as substances and articles of ADR.

(2) Substances having a critical temperature lower than 50°C or, at 50°C, a vapour pressure greater than 300 kPa (3 bar) are deemed to be substances of Class 2.

Note. For the classification of solutions and mixtures (such as preparations and wastes) containing one or more components listed in marginal 2201, see also marginal 2002 (8).

(3) The substances and articles of Class 2 are classified as follows:

A: Compressed gases having a critical temperature below -10°C;

B: Liquefied gases having a critical temperature of -10°C or above:

a. Liquefied gases having a critical temperature of 70°C or above;

b. Liquefied gases having a critical temperature of -10°C or above, but below 70°C;

C: Deeply-refrigerated liquefied gases;

D: Gases dissolved under pressure;

E: Aerosol dispensers and non-refillable containers of gas under pressure;

F: Gases subject to special requirements; and

G: Empty receptacles and empty tanks.

The substances and articles of Class 2 are subdivided according to their chemical properties, as follows:

(a) non-inflammable;

(a 1) non-inflammable, toxic

(b) inflammable;

(b 1) inflammable, toxic;

(c) chemically unstable;

(c 1) chemically unstable, toxic.

Unless otherwise specified, chemically unstable substances shall be considered to be inflammable.

The names of corrosive gases and of articles containing such gases shall be followed by the word "corrosive" in brackets.

(4) Substances of Class 2 which are listed among the chemically unstable gases are to be accepted for carriage only if the necessary steps have been taken to prevent their dangerous decomposition, disproportion or polymerization during carriage.

To this end, care should in particular be taken to ensure that receptacles and tanks do not contain any substances liable to promote these reactions.

2201

A. Compressed gases (see also marginal 2201a under (a). For gases of 1° (a) and (b) and 2° (a) in aerosol dispensers or in non-refillable containers for gases under pressure, see under 10° and 11°).

Gases having a critical temperature below -10°C are considered to be compressed gases for the purposes of ADR.

1° PURE GASES AND TECHNICALLY-PURE GASES

(a) Non-inflammable

Argon; nitrogen; helium; krypton; neon; oxygen; tetrafluoromethane (R 14).

(a 1) Non-inflammable, toxic

Fluorine (corrosive); boron trifluoride; silicon tetrafluoride (corrosive).

(b) Inflammable

Deuterium; hydrogen; methane.

ADR (continued)

Class 2

2224 receptacles (marginal 2207 (2)(a)), it shall, in addition, bear a label conforming to model No. 12.

2225 Every package containing aerosol dispensers of 10° (b) 2., 10° (b) 1) 2., 10° (c) or 10° (c) 1), or non-refillable containers of gas under pressure of 11° (b), 11° (b) 1), 11° (c) or 11° (c) 1), shall bear a label conforming to model No. 3.

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2226

Particulars in the transport document

(1) The description of the goods in the transport document must be:

(a) in the case of pure and technically-pure gases of 1°, 3°, 5°, 7° or 9°, of aerosol dispensers of 10°, of non-refillable containers of gas under pressure of 11°: one of the names in *italics* in marginal 2201;

(b) in the case of mixtures of gases of 2°, 4°, 6°, 8°, 12° or 13°: "mixture of gases". This description must be supplemented by an indication of the composition of the mixture of gases in volume per cent or mass per cent. Constituents below one per cent need not be indicated. In the case of mixtures of gases of 2° (a), 2° (b), 2° (b) 1), 4° (a), 4° (b), 4° (c), 6° (a), 8° (a) or 8° (b), the descriptions or names customary in the trade which are in *italics* in marginal 2201 may likewise be used, without indication of the composition.

These descriptions must be underlined and followed by particulars of the class, the item number (together with the letter, if any), and the initials "ADR" or "RID" (e.g., 2, 5° (a) 1), ADR).

(2) In the case of consignments of gases which are listed among the chemically unstable gases, the sender shall certify as follows in the transport document: "The necessary steps have been taken to satisfy the requirements of ADR marginal 2200 74)". In the case of consignments of mixtures of gases of 12° or test gases of 13°, the sender shall certify as follows in the transport document: "The conditions laid down in ADR marginal 2201, 12° or 13°, have been complied with".

(3) In the case of consignments of chlorine trifluoride of 3° (a) 1), the sender shall certify as follows in the transport document: "After filling with chlorine trifluoride, the receptacle has been kept under observation for not less than seven days and its leakproofness has been verified".

(4) In the case of tanks containing gases of 7° (a) or 8° (a), other than carbon dioxide and nitrous oxide, the transport document shall bear the following entry:

"The tank is in permanent communication with the atmosphere".

2227-
2236

C. Empty packagings

2237 (1) Receptacles and tanks of 14° shall be closed in the same manner as if they were full.

(2) The description in the transport document shall conform to one of the names given in 14°, (e.g. "Empty receptacle, uncleaned, 2, 14°, ADR"). This text shall be underlined. The description shall be completed by adding the words "Last load", together with the name and item number of the goods last loaded, e.g., Last load: chlorine, 3° (a) 1).

(3) The receptacles of 14° referred to in marginal 2212 (1) (a), (b) and (d) may be transported after the expiry of the time-limit set for the periodic test prescribed in marginal 2215, for the purpose of undergoing the tests.

D. Transitional provisions

2238 The following transitional provisions shall apply to receptacles for compressed or liquefied gases or gases dissolved under pressure:

DEPARTMENT OF TRANSPORTATION

Research and Special Programs Administration

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

[Docket No. HM-215A; Notice No. 94-6]

RIN 2137-AC42

Implementation of 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: Notice of proposed rulemaking.

SUMMARY: This notice proposes to amend the Hazardous Materials Regulations to maintain alignment with corresponding provisions of international standards. 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 proposed revisions are necessary to facilitate the transport of hazardous materials in international commerce.

DATES: Comments must be received by September 6, 1994.

ADDRESSES: Address comments to the Dockets Unit (DHM-30), Research and Special Programs Administration, U.S. Department of Transportation, Washington, DC 20590-0001. Comments should identify the docket and be submitted in five copies. Persons wishing to receive confirmation of receipt of their comments should include a self-addressed stamped post card. The Dockets Unit is located in Room 8421 of the Nassif Building, 400 Seventh Street, SW., Washington, DC. Public dockets may be reviewed between the hours of 8:30 a.m. and 5 p.m. Monday through Friday, except for Federal holidays.

FOR FURTHER INFORMATION CONTACT: Bob Richard, Assistant International Standards Coordinator, telephone (202) 366-0586, Beth Romo or John Gale, Office of Hazardous Materials Standards, telephone (202) 366-8553, Hazardous Materials Safety, Research and Special Programs Administration, U.S. Department of Transportation, 400 Seventh Street, SW., Washington, DC 20590-0001.

SUPPLEMENTARY INFORMATION: On December 21, 1990, the Research and Special Programs Administration (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 Committee of Experts and are distributed to nations throughout the world. They serve as the basis for international modal regulations; specifically the IMDG Code, issued by the International Maritime Organization (IMO), and the ICAO Technical Instructions. In 49 CFR 171.12, the HMR authorize 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 conformance with the ICAO Technical Instructions, and by motor vehicle either before or after being transported by aircraft, are authorized in § 171.11 (with certain exceptions).

On December 22, 1992, RSPA issued an interim final rule [Docket HM-215; 57 FR 80738] amending § 171.7 by incorporating the 1993-1994 edition of the ICAO Technical Instructions and Amendment 26 to the IMDG Code. This rulemaking action authorized the use of the updated international regulations, effective January 1, 1993. Amendment 26 promulgated numerous miscellaneous changes to the IMDG Code regarding classification, labeling, packaging, and documentation. The 1993-1994 edition of the ICAO Technical Instructions contained amendments relating to the seventh revised edition of the UN Recommendations, as well as changes specific to air transportation.

The HMR, as revised under Docket HM-181, are largely based on the sixth revised edition of the UN Recommendations. Selected provisions from the seventh and eighth revised editions of the UN Recommendations have been incorporated into the HMR under subsequent Docket HM-181 rulemaking actions. This NPRM seeks to

more fully align the HMR with the seventh and eighth revised editions of the UN Recommendations. These proposed changes to the HMR will provide consistency with the international air and sea transport requirements which, effective January 1, 1995, will be aligned with the eighth revised edition of the UN Recommendations.

While the changes introduced in the seventh and eighth revised editions are extensive and in some cases very detailed, some of the more significant changes are highlighted below.

Major changes in the seventh revised edition include:

- Definitions and criteria for the classification for gases were revised, three subdivisions for gases were created, and the physical states of gases were defined (e.g. liquefied gas, refrigerated liquefied gas, etc). Gases listed in the UN Recommendations were reclassified according to the agreed criteria. This effort will lead to improved harmonization of U.S. and European requirements for the classification of gases. These changes have already been incorporated in the HMR in Subpart D of Part 173.
- Training requirements similar to those introduced into Part 172 Subpart H of the HMR under Docket HM-126F were added.
- Criteria for self-reactive substances assigned to Division 4.1 were developed. The applicable test methods and criteria for self-reactive substances are based on organic peroxide tests and criteria. New generic proper shipping names for self-reactive substances were introduced.
- A number of new "Not Otherwise Specified" (N.O.S.) proper shipping names for substances in Class 4 and Division 5.1 were introduced. Proposals for introducing the new names originated from efforts in Europe to adopt the classification criteria for Class 4 and Division 5.1 into European road and rail regulations.
- Provisions defining conditions under which minor variations of tested design-type packagings and requirements for "V" marked packagings were added. Proposals to include these requirements originated in the U.S. out of concern for the extent of testing that would otherwise be required to certify packagings in accordance with the UN performance standards. These provisions have already been adopted in the HMR in Subpart M of Part 178.

Major changes in the eighth revised edition include:

- Numerous additional types of packaging were added to the explosive packing instructions. This was largely a U.S. initiative arising from a concern for the number of packagings that would otherwise have to be authorized through exemptions.
- Provisions for elevated temperature materials were added. These provisions are consistent with those adopted in the HMR under Docket HM-198A.
- Criteria defining substances not able to sustain combustion were included. The criteria for flammable liquids were amended so that certain substances which meet the flash point criteria for flammable liquids, but which are shown to be incapable of sustaining combustion, are excepted from the Recommendations. This proposal was originally proposed by the United Kingdom, which had similar provisions in its domestic regulations.
- The criteria for corrosive substances were modified to reference the Organization for Economic Cooperation and Development test protocol for skin corrosivity and to clarify the extent of skin damage needed for substances to be classified as corrosives. This was done in response to initial proposals by Germany and the European chemical industry.
- A number of new N.O.S. proper shipping names for substances in Class 3, Division 6.1 and Class 8 were introduced. Proposals for introducing the new names originated from efforts in Europe to adopt the classification criteria for these hazard classes into European road and rail regulations. Proper shipping names for petroleum products also were updated as part of this effort.
- The Recommendations were amended to require that a package bear labels representing each subsidiary risk of a material described using an N.O.S. proper shipping name. This amendment was based on a proposal made by the United Kingdom.
- The current Division 6.1 Packing Group III label was deleted. For a more detailed discussion of the events leading to this decision, see RSPA's Notice 93-21 under Docket HM-217 published in the Federal Register on November 8, 1993 [58 FR 59224].
- Requirements for a freight container packing certificate were added on the basis of a United Kingdom proposal seeking to bring the UN Recommendations in line with the IMDG Code requirements.
- A number of substances meeting the criteria of Division 6.1 Packing Group

I toxic by inhalation were reclassified based on U.S. proposals.

- Provisions on the marking of steel drums used to transport dangerous goods and provisions clarifying the requirements applicable to drum reconditioners and remanufacturers were included on the basis of proposals by the International Association for Drum Reconditioners (ICDR).
- Detailed test criteria for lithium batteries were added. The new provisions allow batteries with a higher lithium content to be excepted from regulation if they meet new tests and criteria. The initial proposal on this topic was introduced by Canada.
- Criteria under which air bag modules and air bag inflators could be transported as Class 9 items were introduced. Proper shipping names for these articles were also added. These changes were made on the basis of U.S. proposals.

With a few exceptions described in this paragraph, the following changes are proposed to ensure a basic consistency with many changes contained in the seventh and eighth revised editions of the UN Recommendations, the 1993-1994 and the 1995-1996 ICAO Technical Instructions, and Amendments 26 and 27 of the IMDG Code. However, proposed changes to the KEEP AWAY FROM FOOD label and placard provisions will be addressed in a notice of proposed rulemaking under Docket HM-217. In addition, proposed amendments to provisions for Division 6.2 materials (infectious substances) will be addressed in a separate rulemaking action under Docket HM-181G. Although the eighth revised edition of the UN Recommendations adopted a quality assurance program for the manufacture of performance packagings, RSPA is not proposing a formal quality assurance program in this document. RSPA believes that periodic retest provisions in Subpart M of Part 178 offer an equivalent measure of quality assurance, but RSPA may propose adoption of a more formal quality assurance program in a future rulemaking action. Comments are solicited on this issue.

Summary of Proposed Regulatory Changes by Section

Part 171

Section 171.7. Various standards such as those issued by the International Organization for Standardization (ISO) and the American Society for Testing and Materials (ASTM) would be added or updated, and the most current

versions of the ICAO Technical Instructions, the IMDG Code, and the UN Recommendations would be incorporated.

Section 171.8. New definitions for "Asphyxiant gas," "Gas" and "Siftproof packaging" would be added, and definitions for "Box," "Liquid," "Overpack" and "Solid" would be revised for consistency with the seventh and eighth revised editions of the UN Recommendations. The definition for "UN standard packaging" would be revised to clarify that it applies to both U.S.-manufactured and foreign-manufactured packagings and to delete reference to Subparts L and M of Part 178.

Section 171.11. Paragraph (d)(5) would be revised to include the word "toxic" when referring to a poison.

Section 171.12. Paragraph (c) would be revised to clarify that this paragraph applies only to the shipment of hazardous materials through U.S. port areas in the course of being transported from one foreign country to another.

In addition, paragraph (b) would be revised for the following reasons. RSPA received three petitions for rulemaking requesting an amendment to the HMR to require a container packing certification attesting that the freight container has been properly packed, stowed, segregated and secured for transport. Those responsible for packing the unit would be required to provide a certificate or declaration to the carrier for international transportation by vessel.

A freight container packing certification requirement was adopted several years ago under Amendment 24 to the IMDG Code and became effective worldwide on January 1, 1994, as mandated under the International Convention on Safety of Life at Sea (SOLAS Convention). When hazardous materials are packed into a freight container or transport vehicle for transportation by vessel, those responsible for packing the unit must provide a certificate or declaration to the carrier attesting that the container is suitable for transport, that it contains compatible materials in packages that have been properly inspected, packed, and secured, and the container and packages are properly marked, labeled, and placarded. This certification may appear either in a separate document or in a signed statement provided on the dangerous goods shipping document.

Because the U.S. is a signatory to the SOLAS Convention, petitioners urged RSPA to adopt a similar container packing certification requirement under the HMR. RSPA is proposing to amend §§ 171.12(b) and 176.27(c) to reference

IMDG Code requirements for a container packing certification for freight containers and transport units intended for carriage by vessel. A "unit" could be a freight container, van trailer, or other transport vehicle. This requirement would apply to persons who load hazardous materials for transportation (including freight forwarders, freight consolidators and non-vessel operating common carriers) or transport hazardous materials by vessel.

Section 171.14. Paragraph (c)(3) contains provisions for intermixing old and new hazard communication requirements. Because of the October 1, 1993 mandatory compliance date for new hazard communication requirements, these provisions no longer apply. Therefore, paragraph (c)(3) would be removed and reserved.

Part 172

Sections 172.101 and 172.102. RSPA is proposing to revise the Hazardous Materials Table (HMT) and the list of special provisions in § 172.102 for basic conformance with the eighth revised edition of the UN Recommendations, the ICAO Technical Instructions (1995-1996 edition) and the 27th edition of the IMDG Code. Under Docket HM-181, the HMT was revised by consolidating the existing HMT, the Optional Table in § 172.102, the UN Recommendations' List of Dangerous Goods, the ICAO Dangerous Goods List, the IMDG Code list of dangerous goods, the list of dangerous goods found in Canada's Transport of Dangerous Goods (TDG), and the IM Tank Table. The IM Tank Table, though not codified in the HMR, authorized the transport of hazardous materials in intermodal (IM) portable tanks. The Optional Table contained in the pre-HM-181 HMR was the table used for selection of proper shipping names to be used in domestic and international transportation by vessel.

RSPA consolidated the tables under Docket HM-181 to simplify the use and reduce the volume of the HMR, as well as to align HMR hazard communication and classification requirements with the UN Recommendations. Since publication of HM-181, the UN, ICAO, and IMO have incorporated changes to their lists of dangerous goods. If RSPA does not incorporate comparable changes to the HMT, the result will be two sets of regulations (one for domestic and one for international transportation) and confusion in the regulated community—which could result in unsafe shipments and restrictions on international trade. In addition, by not adopting such changes, RSPA will expend considerable resources reviewing and issuing approvals and

initiating separate rulemakings to authorize shipments prepared in accordance with the international standards.

Proposed changes to shipping descriptions are based primarily on Chapters 2 and 3 of the UN Recommendations. In turn, the changes to the IMO and ICAO lists of dangerous goods also are based on the UN Recommendations. Proposed changes include additions, deletions and revisions of shipping names, classifications, subsidiary hazards, labeling requirements, and packing group assignments—such as adding or changing a material's packing group. In addition, RSPA proposes to permit a special provision to be assigned to a shipping description to clarify the composition of a material described under a specific entry.

Except for certain materials, such as elevated temperature materials and sodium batteries, proposed changes to a material's packaging authorizations are based on a material's packing group and subsidiary hazard, and physical state (solid, liquid, or gas). Packaging authorizations would be consistent with corresponding entries already appearing in the HMT. For example, the non-bulk packaging section for a Class 3, Packing Group I material would be § 173.201. A Division 6.1, Packing Group III material would be assigned § 173.153 for a possible packaging exception, while a Division 6.1, Packing Group I or II material would receive no packaging exception section. A Class 8, Packing Group I liquid material would be assigned § 173.243 for bulk packaging requirements while a Class 8, Packing Group II liquid material would be assigned to § 173.242. It is important to note that any change to a material's classification, packing group, or subsidiary hazards could have an effect on the material's packaging authorizations.

Under HM-181, IM tank authorizations were consolidated into the HMT (through the use of special provisions prefaced by a "T") and were consistent with the sixth revision of the UN Recommendations. In this notice, RSPA is proposing to revise the IM tank authorizations for consistency with the changes in Chapter 12 of the seventh and eighth revised editions of the UN Recommendations. These proposed changes can be found in the "T-note" authorizations that are listed in Column 7 of the HMT.

The aircraft quantity limitations in Column 9 and the vessel stowage requirements in Column 10 would be revised for consistency with the ICAO Technical Instructions and IMDG Code,

respectively. In § 172.101(k)(1)-(k)(5), the definitions of the vessel stowage codes, which are prescribed in the § 172.101 Table, would be revised for consistency with the IMDG Code. This proposed revision would broaden current stowage provisions for hazardous materials on cargo vessels to apply to hazardous materials (such as propane) on passenger vessels carrying a limited number of passengers.

Changes proposed to the HMT are quite extensive—approximately 33% of the entries in the HMT would be changed. Therefore, RSPA is publishing the entire proposed HMT in this notice, but does not believe it is necessary to discuss every proposed change in this section review. However, in order to facilitate the reader's understanding of the changes to the HMT, RSPA is providing a list of all entries that would be added, deleted, or made more restrictive. This list includes changes in (1) the shipping name, (2) IM tank authorization, (3) subsidiary labeling, (4) classification, and (5) packaging. In addition, a discussion of some of the more substantive changes is provided.

Many proper shipping names were added in the 1995-1996 ICAO Technical Instructions to reflect both singular and plural forms. The eighth revised edition of the UN Recommendations added a provision allowing the use of either the singular or plural form of a proper shipping name. RSPA is not proposing to add separate entries in the HMT to indicate both the singular and plural form of a proper shipping name because § 172.101(c)(1) currently permits use of either form.

Numerous editorial changes would be made to the HMT to correct misspellings and errors, and to provide more consistency. An entry having only a typographical error corrected is not shown in the list of significant changes. Therefore, it is necessary to review the entire HMT to determine every proposed change.

Currently under the HMR, compressed and liquefied gases of the same material have the same shipping description and identification number (I.D. number). RSPA is proposing to split the generic shipping descriptions for "Compressed or Liquefied gases" into separate entries and add new generic entries and I.D. numbers for liquefied gases, consistent with the UN Recommendations. In addition, new generic entries would be added for self-heating liquids and solids. Specific entries for self-reactive materials would be removed from the HMT and replaced with new generic entries.

The UN Recommendations, ICAO Technical Instructions, and IMDG Code replaced the term "poisonous" with the term "toxic." RSPA is proposing to amend the proper shipping names in the HMT that contain the word "poisonous" by replacing the word "poisonous" with the word "toxic" to conform to international terminology. For example, the proper shipping name "Flammable liquid, poisonous, n.o.s." would be revised to read "Flammable liquid, toxic, n.o.s.". However, § 172.101(c)(3) would be revised to allow the use of the word "poisonous" interchangeably with the word "toxic".

The words "inorganic" and "organic" would be added to certain generic shipping descriptions. Comments are invited regarding the safety benefits of these modified descriptions, and as to whether there is a need for domestic exceptions. In addition, RSPA is proposing to add new generic entries for a corrosive material to indicate whether the material is "basic" or "acidic." RSPA also is proposing to add new entries, as adopted in the UN Recommendations, for solid materials containing flammable, corrosive, or toxic liquids.

The eighth revised edition of the UN Recommendations added entries and assigned new UN I.D. numbers for elevated temperature materials. RSPA is proposing to change the I.D. numbers for elevated temperature materials in the HMT to correspond with those in the UN Recommendations.

Currently under the HMR, air bags are assigned to the Division 4.1 hazard class and the proper shipping name is limited to "Air bag inflators" or "Air bag modules." Based on changes in the UN Recommendations, RSPA would revise the proper shipping name for air bags to include seat belt pre-tensioners and modules. The new proper shipping name would be "Air bag inflators or Air bag modules or Seat-belt modules or Seat-belt pre-tensioners." This entry also would reflect a change in classification from Division 4.1 to Class 9, adoption of a new UN number, and removal of the "D" in Column 1.

Two new domestic entries would be added for "Toy caps" and "Toy propellant devices". Toy propellant devices containing 30 grams or less propellant would be classed as Division 1.4S while items containing more than 30 grams but not more than 62.5 grams would be classed as Division 1.4C.

Two new entries for "Batteries, containing sodium" and "Cells, containing sodium" would be added in the HMT based on the UN Recommendations entry (UN 3292). Since these materials were previously authorized only under the terms of an exemption or competent authority approval, RSPA is proposing to add a new packaging section § 173.189 that prescribes general packaging and transport requirements for these materials consistent with the UN Recommendations.

Currently, in Column 1, a "+" is assigned to certain materials meeting the criteria of Division 6.1, Packing Group I, toxic by inhalation, but classed in another hazard class. The eighth revised edition of the UN Recommendations incorporated revisions to the hazard classification of these materials to Division 6.1, Packing Group I, toxic by inhalation. Therefore, the "+" would be removed from Column 1 for any liquid poison by inhalation (PIH) material newly classed in Division 6.1, Packing Group I.

The shipping name "acetonitrile" is proposed to replace the name "methyl cyanide." The hazard class for "Formaldehyde solutions" currently shown as Class 9 would be revised to Class 8. Numerous generic pesticide entries would be revised to remove the "n.o.s." from the shipping names.

Previously under the UN Recommendations, ICAO Technical Instructions, and the IMDG Code, a subsidiary hazard of Division 6.1, Packing Group III was not recognized. However, the international standards now take such a subsidiary hazard into account. Therefore, numerous entries would appear for the first time with a Division 6.1, Packing Group III subsidiary hazard. In addition, an

exception in § 172.101(c)(12)(iii), which allows a subsidiary hazard of Division 6.1, Packing Group III to be disregarded when selecting a proper shipping name, would be removed.

Revised generic shipping descriptions for Division 4.3 materials would be prefaced by the words "water-reactive" in lieu of the words "substances which in contact with water emit". The prefix of the identification number for "Polyester resin kits" would be changed to "UN" from "NA" and a special provision "40" would be added in Column 7 that would specify contents and packaging requirements for polyester resin kits. In addition, Special Provision "117" would be removed from the entry corresponding to "UN 0150."

The entry for alcoholic beverages would be revised in Column 7 to include Special Provision "24", which would indicate that alcoholic beverages with more than 70 percent alcohol by volume would be assigned Packing Group II and alcoholic beverages containing more than 24 percent but not more than 70 percent alcohol would be assigned Packing Group III. In addition, § 173.150 would be revised to increase (to five liters per inner packaging) the quantity of alcoholic beverage in a packaging excepted from the HMR and to provide an exception adopted in the UN Recommendations to permit Packing Group III alcoholic beverages transported in receptacles of 250 L (66 gallons) or less to be excepted from the HMR unless transported by air.

The following tables identify those entries that would be: (1) deleted; (2) significantly changed; or (3) added. An entry is considered significantly changed if there is a change in (1) the shipping name, (2) IM tank authorization, (3) subsidiary labeling, (4) classification, or (5) packaging. Each entry is identified by its identification number which, along with the cross-reference table appearing in the HMR prior to the HMT, can be used to identify the affected entries. Unless otherwise indicated, the identification numbers are "UN" numbers:

LIST OF ENTRIES THAT WOULD BE DELETED FROM THE § 172.101 TABLE

NA2255*	0416	1270	1705	2497	3030-3043
NA2810*	1118	1271	1864	2553	NA9250*
NA2811*	1255	1584	2207	2860	NA9276*
0273	1256	1592	2229	2951-2955	
0274	1257	1703	2449	2970-2973	

* See new entry added by the UN recommendations.

LIST OF ENTRIES THAT WOULD BE SIGNIFICANTLY CHANGED

NA1760	1322	1474	1731	2006	2379	2534	2818
NA1986	1325	1475	1740	2022	2382	2557	2821
NA2922	1328	1477	1747	2029	2383	2564	2823
1106	1334	1481	1750	2047	2386	2571	2826
1125	1336	1482	1751	2051	2389	2583	2834
1135	1337	1483	1752	2076	2399	2584	2837
1143	1344	1489	1755	2189	2401	2585	2841
1154	1348	1502	1757	2194	2407	2586	2845
1158	1349	1506	1761	2195	2417	2604	2846
1160	1350	1508	1773	2196	2418	2606	2857
1162	1353	1511	1783	2198	2420	2610	2869
1167	1354	1517	1787	2206	2421	2616	2874
1198	1355	1549	1788	2209	2427	2619	2881
1202	1356	1564	1789	2211	2428	2626	2904-2905
1210	1357	1566	1809	2218	2429	2670	2921-2930
1214	1361	1570	1811	2219	2430	2677	2938
1221	1364	1588	1814	2232	2438	2679	2945-2946
1228	1373	1589	1816	2242	2445	2681	2965
1235	1378	1590	1819	2251	2461	2684	2985-2988
1265	1395	1599	1824	2257	2478	2693	2991-3021
1268	1402	1601	1888	2258	2482	2733	3024-3027
1274	1408	1602	1908	2260	2484	2734	3049-3050
1277	1409	1605	1922	2264	2485	2735	3065-3066
1282	1415	1613	1952	2267	2495	2741	3071
1289	1418	1614	1953	2270	2501	2742	3079
1296	1420	1648	1954	2276	2502	2757-2787	3084
1297	1428	1660	1955	2332	2517	2789	3086-3088
1298	1454	1708	1956	2337	2521	2796	3094
1308	1455	1715	1975	2343	2526	2801	3096
1310	1458	1719	1986	2351	2529	2810	3098-3100
1320	1459	1722	1988	2359	2530	2813	3119-3150
1321	1462	1724	1992	2361	2533	2817	

LIST OF ADDITIONS TO THE § 172.101
TABLE

UN #	SHIPPING NAME
0491 ..	CHARGES, PROPELLING.
0492 ..	SIGNALS, RAILWAY TRACK, EXPLOSIVE.
0493 ..	SIGNALS, RAILWAY TRACK, EXPLOSIVE.
0494 ..	JET PERFORATING GUNS, CHARGED, oil well, without detonator.
0495 ..	PROPELLANT, LIQUID.
0496 ..	OCTONAL.
0497 ..	PROPELLANT, LIQUID.
0498 ..	PROPELLANT, SOLID.
0499 ..	PROPELLANT, SOLID.
1851 ..	MEDICINE, LIQUID, TOXIC, N.O.S.
1990 ..	BENZALDEHYDE.
3155 ..	PENTACHLOROPHENOL.
3156 ..	COMPRESSED GAS, OXIDIZING, N.O.S.
3157 ..	LIQUEFIED GAS, OXIDIZING, N.O.S.
3158 ..	GAS, REFRIGERATED LIQUID, N.O.S.
3159 ..	1,1,1,2-TETRAFLUOROETHANE.
3160 ..	LIQUEFIED GAS, TOXIC, FLAMMABLE, N.O.S.
3161 ..	LIQUEFIED GAS, FLAMMABLE, N.O.S.
3162 ..	LIQUEFIED GAS, TOXIC, N.O.S.
3163 ..	LIQUEFIED GAS, N.O.S.
3164 ..	ARTICLES, PRESSURIZED PNEUMATIC or HYDRAULIC (containing non-flammable gas).

LIST OF ADDITIONS TO THE § 172.101
TABLE—Continued

UN #	SHIPPING NAME
3166 ..	ENGINES, INTERNAL COMBUSTION, including when fitted in machinery or vehicles.
3167 ..	GAS SAMPLE, NON-PRESSURIZED, FLAMMABLE, N.O.S., not refrigerated liquid.
3168 ..	GAS SAMPLE, NON-PRESSURIZED, TOXIC, FLAMMABLE, N.O.S., not refrigerated liquid.
3169 ..	GAS SAMPLE, NON-PRESSURIZED, TOXIC, N.O.S., not refrigerated liquid.
3170 ..	ALUMINIUM PROCESSING BY-PRODUCTS.
3171 ..	BATTERY-POWERED VEHICLE or BATTERY-POWERED EQUIPMENT (wet battery).
3174 ..	TITANIUM DISULPHIDE.
3175 ..	SOLIDS CONTAINING FLAMMABLE LIQUID, N.O.S.
3176 ..	FLAMMABLE SOLID, ORGANIC, MOLTEN, N.O.S.
3178 ..	FLAMMABLE SOLID, INORGANIC, N.O.S.
3179 ..	FLAMMABLE SOLID, TOXIC, INORGANIC, N.O.S.
3180 ..	FLAMMABLE SOLID, CORROSIVE, INORGANIC, N.O.S.
3181 ..	METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.
3182 ..	METAL HYDRIDES, FLAMMABLE, N.O.S.
3183 ..	SELF-HEATING LIQUID, ORGANIC, N.O.S.

LIST OF ADDITIONS TO THE § 172.101
TABLE—Continued

UN #	SHIPPING NAME
3184 ..	SELF-HEATING LIQUID, TOXIC, ORGANIC, N.O.S.
3185 ..	SELF-HEATING LIQUID, CORROSIVE, ORGANIC, N.O.S.
3186 ..	SELF-HEATING LIQUID, INORGANIC, N.O.S.
3187 ..	SELF-HEATING LIQUID, TOXIC, INORGANIC, N.O.S.
3188 ..	SELF-HEATING LIQUID, CORROSIVE, INORGANIC, N.O.S.
3189 ..	METAL POWDER, SELF-HEATING, N.O.S.
3190 ..	SELF-HEATING SOLID, INORGANIC, N.O.S.
3191 ..	SELF-HEATING SOLID, TOXIC, INORGANIC, N.O.S.
3192 ..	SELF-HEATING SOLID, CORROSIVE, INORGANIC, N.O.S.
3194 ..	PYROPHORIC LIQUID, INORGANIC, N.O.S.
3200 ..	PYROPHORIC SOLID, INORGANIC, N.O.S.
3203 ..	PYROPHORIC ORGANOMETALLIC COMPOUND, N.O.S.
3205 ..	ALKALINE EARTH METAL ALCOHOLATES, N.O.S.
3206 ..	ALKALI METAL ALCOHOLATES, SELF-HEATING, CORROSIVE, N.O.S.
3207 ..	ORGANOMETALLIC COMPOUND or COMPOUND SOLUTION or COMPOUND DISPERSION, WATER-REACTIVE, FLAMMABLE, N.O.S.

LIST OF ADDITIONS TO THE § 172.101
TABLE—Continued

UN #	SHIPPING NAME
3208 ..	METALLIC SUBSTANCE, WATER-REACTIVE, N.O.S.
3209 ..	METALLIC SUBSTANCE, WATER-REACTIVE, SELF-HEATING, N.O.S.
3210 ..	CHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3211 ..	PERCHLORATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3212 ..	HYPOCHLORITES, INORGANIC, N.O.S.
3213 ..	BROMATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3214 ..	PERMANGANATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3215 ..	PERSULPHATES, INORGANIC, N.O.S.
3216 ..	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3217 ..	PERCARBONATES, INORGANIC, N.O.S.
3218 ..	NITRATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3219 ..	NITRITES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
3220 ..	PENTAFLUOROETHANE.
3221 ..	SELF-REACTIVE LIQUID TYPE B.
3222 ..	SELF-REACTIVE SOLID TYPE B.
3223 ..	SELF-REACTIVE LIQUID TYPE C.
3224 ..	SELF-REACTIVE SOLID TYPE C.
3225 ..	SELF-REACTIVE LIQUID TYPE D.
3226 ..	SELF-REACTIVE SOLID TYPE D.
3227 ..	SELF-REACTIVE LIQUID TYPE E.
3228 ..	SELF-REACTIVE SOLID TYPE E.
3229 ..	SELF-REACTIVE LIQUID TYPE F.
3230 ..	SELF-REACTIVE SOLID TYPE F.
3231 ..	SELF-REACTIVE LIQUID TYPE B, TEMPERATURE CONTROLLED.
3232 ..	SELF-REACTIVE SOLID TYPE B, TEMPERATURE CONTROLLED.
3233 ..	SELF-REACTIVE LIQUID TYPE C, TEMPERATURE CONTROLLED.
3234 ..	SELF-REACTIVE SOLID TYPE C, TEMPERATURE CONTROLLED.
3235 ..	SELF-REACTIVE LIQUID TYPE D, TEMPERATURE CONTROLLED.
3236 ..	SELF-REACTIVE SOLID TYPE D, TEMPERATURE CONTROLLED.
3237 ..	SELF-REACTIVE LIQUID TYPE E, TEMPERATURE CONTROLLED.
3238 ..	SELF-REACTIVE SOLID TYPE E, TEMPERATURE CONTROLLED.
3239 ..	SELF-REACTIVE LIQUID TYPE F, TEMPERATURE CONTROLLED.
3240 ..	SELF-REACTIVE SOLID TYPE F, TEMPERATURE CONTROLLED.
3241 ..	2-BROMO-2-NITROPROPANE-1,3-DIOL.
3242 ..	AZODICARBONAMIDE.
3243 ..	SOLIDS CONTAINING TOXIC LIQUID, N.O.S.
3244 ..	SOLIDS CONTAINING CORROSIVE LIQUID, N.O.S.
3246 ..	METHANESULPHONYL CHLORIDE.
3247 ..	SODIUM PEROXOBORATE, ANHYDROUS.
3248 ..	MEDICINE, LIQUID, FLAMMABLE, TOXIC, N.O.S.
3249 ..	MEDICINE, SOLID, TOXIC, N.O.S.
3250 ..	CHLOROACETIC ACID, MOLTEN.
3251 ..	ISOSORBIDE-5-MONONITRATE.

LIST OF ADDITIONS TO THE § 172.101
TABLE—Continued

UN #	SHIPPING NAME
3252 ..	DIFLUOROMETHANE.
3253 ..	DISODIUM TRIOXOSILICATE, PENTAHYDRATE.
3254 ..	TRIBUTYLPHOSPHANE.
3255 ..	tert-BUTYL HYPOCHLORITE.
3256 ..	ELEVATED TEMPERATURE LIQUID, N.O.S. with flash point above 37.8 °C, at or above its flash point.
3257 ..	ELEVATED TEMPERATURE LIQUID, N.O.S., at or above 100 °C and below its flash point.
3258 ..	ELEVATED TEMPERATURE SOLID, N.O.S., at or above 240 °C.
3259 ..	AMINES, SOLID, CORROSIVE, N.O.S. or POLYAMINES, SOLID, CORROSIVE, N.O.S.
3260 ..	CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.
3261 ..	CORROSIVE, SOLID, ACIDIC, ORGANIC, N.O.S.
3262 ..	CORROSIVE, SOLID, BASIC, INORGANIC, N.O.S.
3263 ..	CORROSIVE, SOLID, BASIC, ORGANIC, N.O.S.
3264 ..	CORROSIVE, LIQUID, ACIDIC, INORGANIC, N.O.S.
3265 ..	CORROSIVE, LIQUID, ACIDIC, ORGANIC, N.O.S.
3266 ..	CORROSIVE, LIQUID, BASIC, INORGANIC, N.O.S.
3267 ..	CORROSIVE, LIQUID, BASIC, ORGANIC, N.O.S.
3268 ..	AIR BAG INFLATORS or AIR BAG MODULES or SEAT-BELT PRE-TENSIONERS or SEAT-BELT MODULES.
3269 ..	POLYESTER RESIN KIT.
3270 ..	NITROCELLULOSE MEMBRANE FILTERS.
3271 ..	ETHERS, N.O.S.
3272 ..	ESTERS, N.O.S.
3273 ..	NITRILES, FLAMMABLE, TOXIC, N.O.S.
3274 ..	ALCOHOLATES SOLUTION, N.O.S., in alcohol.
3275 ..	NITRILES, TOXIC, FLAMMABLE, N.O.S.
3276 ..	NITRILES, TOXIC, N.O.S.
3277 ..	CHLOROFORMATES, TOXIC, CORROSIVE, N.O.S.
3278 ..	ORGANOPHOSPHORUS COMPOUND, TOXIC N.O.S.
3279 ..	ORGANOPHOSPHORUS COMPOUND, TOXIC, FLAMMABLE, N.O.S.
3280 ..	ORGANOARSENIC COMPOUND, N.O.S.
3281 ..	METAL CARBONYLS, N.O.S.
3282 ..	ORGANOMETALLIC COMPOUND, TOXIC N.O.S.
3283 ..	SELENIUM COMPOUND, N.O.S.
3284 ..	TELLURIUM COMPOUND, N.O.S.
3285 ..	VANADIUM COMPOUND, N.O.S.
3286 ..	FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S.
3287 ..	TOXIC LIQUID, INORGANIC, N.O.S.
3288 ..	TOXIC SOLID, INORGANIC, N.O.S.
3289 ..	TOXIC LIQUID, CORROSIVE, INORGANIC, N.O.S.
3290 ..	TOXIC SOLID, CORROSIVE, INORGANIC, N.O.S.

LIST OF ADDITIONS TO THE § 172.101
TABLE—Continued

UN #	SHIPPING NAME
3292 ..	BATTERIES, CONTAINING SODIUM, or CELLS, CONTAINING SODIUM.
3293 ..	HYDRAZINE, AQUEOUS SOLUTION with not more than 37% hydrazine, by mass.
3294 ..	HYDROGEN CYANIDE, SOLUTION IN ALCOHOL with not more than 45% hydrogen cyanide.
3295 ..	HYDROCARBONS, LIQUID, N.O.S.
3296 ..	HEPTAFLUOROPROPANE.
3297 ..	ETHYLENE OXIDE AND CHLORO-TETRAFLUOROETHANE MIXTURE with not more than 8.8% ethylene oxide.
3298 ..	ETHYLENE OXIDE AND PENTAFLUOROETHANE MIXTURE with not more than 7.9% ethylene oxide.
3299 ..	ETHYLENE OXIDE AND TETRAFLUOROETHANE MIXTURE with not more than 5.6% ethylene oxide.
3300 ..	ETHYLENE OXIDE AND CARBON DIOXIDE MIXTURE with more than 87% ethylene oxide.
3301 ..	CORROSIVE LIQUID, SELF-HEATING, N.O.S.

Appendix B to § 172.101. In a November 5, 1992 final rule entitled "Marine Pollutants" (57 FR 52934), RSPA stated that it would consider, in a future rulemaking action, a criteria-based system to identify marine pollutants. Adoption of a criteria-based system would provide continuity and harmony, as well as permit identification of potential pollutants previously not identified. Therefore, RSPA is proposing to add two notes which are consistent with recent IMO decisions. The first, Note 4, would allow a material meeting criteria for a marine pollutant in the IMDG Code but not listed in Appendix B of § 172.101, to be transported as a marine pollutant. Note 5 would allow the Associate Administrator for Hazardous Materials Safety to except from HMR requirements a material listed in Appendix B of the HMR that does not meet the IMDG Code criteria for a marine pollutant. In addition, a number of materials would be added to, or removed from, the HMR's List of Marine Pollutants.

Section 172.102. Special Provisions 23, 24, 26, 32, 34-40, and 43-51 would be added to § 172.102. These special provisions relate to certain materials' classifications and any special packaging requirements that are necessary to safely transport these materials. Due to an oversight, Special Provision 23 was already added in a

final rule published June 2, 1994 [Docket HM-166Z; 59 FR 28493]. This special provision concerned classification of ammonium nitrate fertilizer. Special Provision 23 in this notice does not apply to ammonium nitrate fertilizer and is not intended to revise the recently adopted Special Provision 23. However, because of a time constraint and the difficulty in amending Column 7 of the HMT, the new provision will be proposed in this notice under Special Provision 23, but will be renumbered to Special Provision 38 in the final rule under Docket HM-215A.

Section 172.203. A new paragraph (o) would be added to require additional information to be included in the shipping paper description for organic peroxides and self-reactive materials. In addition, paragraphs (k) and (m) would be revised based on changes to the HMT. In paragraph (k), the list of shipping names requiring technical names would be revised based on changes to the HMT. In paragraph (m), the reference to "Poison" would be modified to include an alternative reference to "Toxic."

Section 172.204. The certification statement in paragraph (a)(2) would be revised to add "placarded" as a condition for declaring a shipment to be properly prepared for transportation. This wording is consistent with international declarations and would enable one shipper certification statement to be used for both domestic and export shipments so that different preprinted forms are not needed.

Section 172.320. Section 172.320 would be revised to permit all product codes that are traceable to an "EX-number" to be marked on boxes of explosives in lieu of the EX number.

Section 172.400a. A new paragraph (c) would be added to state that a subsidiary POISON label is not required on a package bearing a primary CORROSIVE label if the poison hazard of the material inside is based solely on corrosive destruction of tissue and is not due to systemic poisoning. This provision was omitted inadvertently in the Docket HM-181 final rule, and reinstating it would be consistent with international requirements.

Section 172.402. For consistency with revisions to the UN Recommendations, ICAO Technical Instructions, and the IMDG Code, labeling for certain subsidiary hazards would be required. The subsidiary labeling table in paragraph (a)(2) would be revised to exclude Class 3 Packing Group III subsidiary risk materials having a flash point at or above 38 °C (100 °F) from the requirement to label, except when

transporting the materials by air or vessel. This proposed revision would require that a material having a subsidiary risk of Class 3 Packing Group III and a flash point below 38 °C (100 °F) be labeled for the Class 3 subsidiary hazard in accordance with this section. In addition, the exception from subsidiary hazard labeling for Class 8 Packing Group III and Division 6.1 Packing Group III materials transported by highway or rail would be removed. Previously, a Division 6.1 Packing Group III subsidiary hazard was not required internationally or domestically. Based on a change adopted in the eighth revised edition of the UN Recommendations, which removed the STOW AWAY FROM FOODSTUFFS label and placard, packages containing materials having either a primary or subsidiary hazard in Division 6.1 Packing Group III are required to bear a POISON label. As noted previously in this document, RSPA is addressing this issue in a rulemaking action under Docket HM-217. However, RSPA believes that a package containing a material meeting Division 6.1 Packing Group III criteria as either a primary or subsidiary hazard should bear a label which communicates a warning that the material must be kept separate from foodstuffs. Therefore, RSPA is proposing that any material having a subsidiary hazard of Division 6.1 Packing Group III must bear a KEEP AWAY FROM FOOD subsidiary label when transported domestically by any mode. Also, new subsidiary labeling requirements for Class 2 materials would, under this proposal, be added as paragraphs (f) and (g).

Section 172.411. A requirement specifying a minimum height for the compatibility group letter on certain EXPLOSIVE labels would be removed.

Section 172.416. Section 172.416 would be revised to allow the use of the words "TOXIC GAS" on the POISON GAS label.

Section 172.430. Section 172.430 would be revised to allow the use of the word "TOXIC" on the POISON label.

Section 172.540. Section 172.540 would be revised to allow the use of the words "TOXIC GAS" on the POISON GAS placard.

Section 172.547. Section 172.547 would be revised to reduce the size requirement for the word "spontaneously" in the "SPONTANEOUSLY COMBUSTIBLE" placard from 25 mm to 12 mm.

Section 172.554. Section 172.554 would be revised to allow the use of the word "TOXIC" on the POISON placard.

Part 173

Section 173.2a. Consistent with the UN Recommendations, the Precedence of Hazards Table would be amended to account for combinations of Division 4.2 and Class 8 materials which currently are denoted as impossible combinations. In addition, a new footnote 5 would be added to the paragraph (b) table to specify that, for materials having multiple risks which are not listed by technical name in the § 172.101 Table, the most stringent packaging group must be used. Also, a note would be added to the paragraph (b) table to specify the class assignment for a material which meets the definition of Class 8, has an inhalation toxicity by dusts and mists at the Packing Group I level and meets criteria for oral or dermal toxicity.

Section 173.21. A reference to the § 173.224 self-reactive materials table would be revised to reflect proposed changes to the table.

Section 173.22. Paragraph (a)(3)(i) would be revised to indicate that the marking appearing on the bottom of a metal or plastic drum in accordance with § 178.503 would not be an acceptable means of determining if the drum is an authorized packaging.

Section 173.24. Paragraph (d) would be revised to specify the conditions under which foreign-manufactured packagings may be used. The proposed revision would stipulate the conditions under which foreign-manufactured UN packagings may be filled and used in the U.S. Under this proposal, only packagings from countries affording the same degree of acceptance to U.S.-manufactured packagings may be used. Current provisions of the regulations authorize their use only for import/export shipments under §§ 171.11 and 171.12. In addition, paragraph (e)(4)(ii) would be revised to prohibit hazardous materials from being packed or mixed with other hazardous or nonhazardous materials in the same outer packaging if such materials are capable of reacting with each other and causing the evolution of "asphyxiant gases."

Section 173.25. Paragraph (a) would be amended to refer to the definition of "Overpack" in § 171.8, which also would be amended to provide examples of suitable overpacks. Paragraph (b) would be added to authorize shrink-wrapped or stretch-wrapped trays as outer packagings for inner packagings prepared under limited quantity or consumer commodity provisions if the completed package is capable of meeting the Packing Group III performance level and the gross weight of the package does not exceed 20 kg.

Section 173.28. Paragraph (b)(4), as revised under the Docket HM-181 final rule, currently requires that metal and plastic single packagings meet certain minimum thicknesses and that the "minimum" thickness be marked on the package. Since issuance of the Docket HM-181 final rule, the eighth revised edition of the UN Recommendations and the international regulations have adopted a provision that metal drums with a capacity greater than 100 liters must be marked in accordance with tolerances allowed under ISO standard 3574 for each nominal thickness of steel.

Unless the below-described proposed changes to § 173.28 are adopted, thicknesses and thickness marking requirements that differ between the HMR and international regulations could result in confusion, with drum users and reconditioners unsure whether drums are suitable for reuse or remanufacture. Drum manufacturers in the U.S. might find it necessary to mark both minimum and nominal thicknesses on each drum in order to satisfy DOT and international requirements. Consistent with changes proposed in § 178.503(a), RSPA is proposing that metal drums and jerricans which are to be reused be marked with the nominal thickness, in millimeters. The minimum thickness table in paragraph (b)(4) would be revised for metal drums and jerricans to reflect a minimum thickness corresponding to the minimum allowed under ISO standard 3574 for various nominal thicknesses. In developing the minimum thickness proposed for each listed capacity of packaging, the thickness chosen is that most closely corresponding numerically (i.e., without regard to whether it is thicker or thinner) to the minimum thickness previously required. That is, based on the tolerances allowed under ISO 3574 for each nominal thickness of steel, the minimum thickness corresponding to that nominal thickness was determined and compared to the minimum thickness required under the current provisions for the given capacity of packaging. Each proposed minimum thickness would result in a minimum sheet thickness closely corresponding to that required under the current regulations. However, for packagings with a capacity up to and including 120 liters, the proposed minimum thicknesses would result in slight increases in the required thickness.

Drums would continue to be suitable for reuse only if they meet the minimum thickness criteria of the table in paragraph (b)(4). A person reusing a metal drum or jerrican could not rely on the thickness marking appearing on the

packaging to satisfy the minimum thickness requirements, since that marking would represent the nominal, rather than the minimum, thickness in accordance with proposed § 178.503(a)(9). Because the eighth revised edition of the UN Recommendations did not address thickness requirements for plastic packagings, RSPA is not proposing any changes to the thickness requirements for plastic packagings.

Based on the merits of a petition for rulemaking (P-1133), a new paragraph (b)(7) would be added to waive retesting requirements for certain packagings used in limited operations prior to each reuse. The petitioner states that this proposed change would provide consistency with corresponding provisions in international requirements. According to both the HMR and the UN Recommendations, a packaging must be design-qualification tested before use. However, unlike the HMR, the UN Recommendations do not require a packaging to be leakproof tested before it is reused for transport, but only after it is reconditioned. Packagings that are reused without reconditioning include metal drums that are refilled with the same or similar compatible contents and transported within distribution chains controlled by the consignor of the product. RSPA is proposing similar provisions in new paragraph (b)(7) for certain packagings to be reused without leakproof testing. Packagings would be limited to stainless steel, monel, or nickel drums (or other packagings approved by the Associate Administrator for Hazardous Materials Safety) refilled with the same or similar compatible contents and transported by a private carrier, contract carrier, or common carrier in a transport vehicle or freight container used exclusively for such service, within a distribution chain controlled by the offeror. In order to ensure an appropriate level of safety, when stainless steel, monel, or nickel drums are reused without undergoing leakproof testing, they would be required to meet more stringent thickness standards than prescribed in paragraph (b)(4). Other packagings could qualify only if approved by the Associate Administrator for Hazardous Materials Safety. Packagings also would require an inspection prior to each reuse, and any packaging showing evidence of a reduction in integrity would not be authorized for reuse without reconditioning.

Section 173.33. Paragraph (c)(5) would be revised to limit the provisions of the paragraph to materials in Packing Groups I and II of Division 6.1.

Section 173.52. In § 173.52, the description of Compatibility Group B would be revised to clarify that detonators and similar articles are included within this description even if they do not contain primary explosives. In addition, in the descriptions for Compatibility Groups E and F, the word "gel" would be added to clarify that articles with a propelling charge containing gel may not be classified in Compatibility Group E or F.

Section 173.59. In § 173.59, the definitions "powder, smokeless," "propellants," and "charges, propelling" would be revised and definitions for "charges, propelling for cannon," "propellant, liquid," and "propellant, solid" would be added.

Section 173.60. In § 173.60, paragraph (b)(15) would be added to require all plastic packagings to be static-resistant.

Section 173.62. In § 173.62, the Explosives Table would be revised to add new descriptions for Class 1 materials. In addition, the packing method for UN0075 and UN0143 would be revised to E-159. The Table of Packing Methods would be editorially revised to change the reference to steel and aluminum boxes from 4A1 or 4A2 and 4B1 or 4B2 to 4A and 4B, respectively. Several packing methods would be revised by authorizing aluminum boxes (4B) as an alternate packaging. For clarity, the entire proposed Explosive Packing Methods Table has been reprinted with the Table of Particular Packaging Requirements and Exceptions following. Paragraph (e) would be revised to update the military packaging exception to allow explosives packaged prior to January 1, 1990, to be transported in accordance with the packaging provisions in effect on that date.

Section 173.115. The definition of a Division 2.2 gas would be expanded to include asphyxiant and oxidizing gases.

Section 173.120. Definitions for Class 3 liquids would be revised to include provisions for evaluating a material's ability to sustain combustion and to measure flame point. A new method of testing for combustibility would be referenced and added as Appendix H to Part 173. Specific exceptions consistent with the UN Recommendations would be added as paragraphs (a)(3), (a)(4), and (a)(5). In addition, references to ASTM standards would be revised to reflect updated versions. Paragraph (b)(2) would be revised to clarify that an elevated temperature material in Class 3 may not be reclassified as a combustible liquid. As explained more fully in a notice of proposed rulemaking and in a final rule issued under Docket HM-198A [54 FR 38931; September 21, 1989

and 56 FR 49981; October 2, 1991), when a liquid is intentionally heated to a temperature that is equal to or greater than its flash point, flammable vapors are produced above the liquid. If these flammable vapors are exposed to an ignition source, an explosion or fire could result.

Section 173.121. Criteria for including viscous Class 3 materials in Packing Group III would be revised. ISO method ISO 1523-1983 would be referenced for determination of flash point. Several modifications to the method would be provided when the temperature of the flash point is too low for the standard procedures. Reference to ISO method 2431-1989 would reflect the latest revision. The table in § 173.121(b)(1)(iv) would be amended for consistency with the eighth revision of the UN Recommendations.

Section 173.124. The definition of self-reactive materials would be revised to conform to the changes in the UN Recommendations, which now contains "generic" shipping descriptions. When a new self-reactive material is introduced into commerce, its transportation hazards currently are determined based on standard tests. The competent authority then assigns the new self-reactive material to a generic type based on the test results.

In the proposed revision to § 173.124, seven types of self-reactive material (Types A-G) are defined in paragraph (a)(2). The procedure for assigning a specific self-reactive material to a generic type is set forth in paragraph (a)(2)(vi). If a self-reactive material is identified by technical name in the Self-Reactive Materials Table in § 173.224, the generic type is assigned in that Table. The lengthy process by which importing and exporting countries agree on the packaging requirements or assignment of a shipping description for a new self-reactive material would be avoided by using this procedure.

Section 173.128. Editorial changes would be made in paragraphs (a), (c)(2) and (c)(3), and procedures for obtaining approvals would be clarified in revised paragraph (d).

Sections 173.136 and 173.137. The definition and packing group assignment for Class 8 materials would be clarified. Specific test protocols developed by the Organization for Economic Cooperation and Development (OECD) and published in the 1992 OECD Guideline for Testing of Chemicals, No. 404, "Acute Dermal Irritation/Corrosion" would be incorporated. A copy of this guideline may be obtained from the OECD Publications and Information Center, 2001 L Street, Suite 700, Washington,

DC 20036 or by contacting the RSPA Dockets Unit.

Section 173.150. Paragraph (a) would be revised to allow Class 3 materials that meet the definition of Class 8 Packing Group III or Division 6.1 Packing Group III, to utilize limited quantity exceptions provided in this section. Paragraph (b) would be expanded to include limited quantity exceptions for combustible liquids to provide relief from specification packaging and placarding requirements for combustible liquids which are also hazardous substances or hazardous wastes. The paragraph (d) provisions for alcoholic beverages would be revised to clarify that an alcoholic beverage containing 24 percent or less alcohol by volume is not subject to the HMR. The maximum quantity per package of alcoholic beverage excepted from the HMR would be raised from four liters to five liters, and a Packing Group III alcoholic beverage in a packaging of 250 L or less would not be subject to the HMR unless transported by air.

Section 173.152. The limited quantity provisions for organic peroxides would be amended by increasing the authorized net capacity per inner packaging for Type D, E, or F liquid and solid organic peroxides and Type B or C solid organic peroxides. However, the authorized net capacity for liquid Type B or C organic peroxides would decrease from 30 ml to 25 ml per inner packaging.

Section 173.164. Certain exceptions for mercury (metallic and articles containing mercury), would be clarified and a 4H2 solid plastic box would be authorized as an outer packaging, consistent with the ICAO Technical Instructions.

Section 173.168. This section would be amended to limit its applicability to air bag inflators and modules showing certain specified results when subjected to a bonfire test. Under this proposed revision, airbag modules and inflators not meeting the test criteria must be transported as explosives.

Section 173.168. This section would be added to define a "nonspillable battery", establish separate requirements for nonspillable batteries (as opposed to the requirements for wet batteries contained in § 173.159), and provide vibration and pressure differential testing criteria. Except when transporting a wheelchair or other battery-powered mobility aid equipped with a non-spillable battery by air as checked baggage, a nonspillable battery which is protected against short circuits, securely packaged and durably marked would not be subject to any other HMR requirements.

Section 173.171. Paragraph (a) would be revised to clarify that smokeless powder must be examined and approved as both Division 1.3 and Division 4.1.

Section 173.185. RSPA is proposing to amend the requirements for lithium batteries consistent with changes in the UN Recommendations. While the new requirements apply more severe test requirements to lithium batteries, they also will allow batteries with higher quantities of lithium to be transported without being subject to the regulations, provided specified criteria are met. Existing batteries previously allowed to be transported as Class 9 batteries may continue to be transported under the present requirements indefinitely if the present requirements are met.

Section 173.189. This new section would be added to establish the packaging and general transport requirements for batteries and cells containing sodium. The packagings and transport conditions proposed reflect those prescribed for these articles in the UN Recommendations, the ICAO Technical Instructions and the IMDG Code. Specific conditions under which batteries containing liquid sodium may be transported are proposed based on the conditions prescribed for the transport of batteries containing liquid sodium under DOT-E 10917.

Section 173.196. The seventh edition of the UN Recommendations revised a provision for infectious substances packagings to require that either the primary receptacle or the secondary packaging be capable of withstanding the prescribed pressure differential. RSPA is proposing a similar revision to paragraph (f) to clarify that both the inner and the outer packagings are not required to have this capability.

Sections 173.211-213. These sections would be revised to change packaging identification codes (for steel boxes from 4A1 and 4A2 to 4A and for aluminum boxes from 4B1 and 4B2 to 4B) for consistency with international requirements.

Section 173.224. This section would be revised based on the UN Recommendations. Paragraph (b) sets forth the Self-Reactive Materials Table which identifies the technical name for specific self-reactive materials, the identification number which is used to select the appropriate generic shipping description, specifications for concentrations of the self-reactive material, packing methods that may be used, temperature control requirements, and additional special provisions. The existing packing methods for self-reactive materials would be replaced with the packing methods for organic

peroxides which are prescribed in § 173.225.

Paragraph (c) sets forth procedures for new self-reactive materials, formulations and samples. New self-reactive materials and formulations of currently identified self-reactive materials would have to be approved in accordance with the provisions in § 173.124(a)(2)(vi). Paragraph (c)(4) contains provisions for the shipping of samples of new formulations. Paragraph (d) would specify that self-reactive materials of Type F may be transported in bulk only under the approval of the Associate Administrator for Hazardous Materials Safety.

Section 173.225. In § 173.225, paragraph (a) would be revised to prohibit the use of metallic non-bulk packagings meeting a Packing Group I packaging standard. Paragraph (c)(5) would be added to authorize the transportation of mixtures of organic peroxides that are specifically identified in the Organic Peroxides Table without approval by the Associate Administrator for Hazardous Materials Safety. In addition, the Organic Peroxide Table would be revised to add new organic peroxides adopted in the UN Recommendations.

Section 173.304. In the paragraph (a)(2) table, for the entry "carbon dioxide," an erroneous reference to a DOT-31800 cylinder would be corrected to authorize a DOT-3T1800 cylinder for carbon dioxide.

Section 173.306. In paragraph (a)(3)(v), the hot water immersion test for aerosols and small gas receptacles would include a reference temperature of 50 °C (122 °F) in addition to the reference temperature of 55 °C (131 °F). A reference temperature of 50 °C would be permitted if the liquid phase of the materials contained in the receptacle does not exceed 95 percent of the capacity of the receptacle at 50 °C. In addition, provisions would be added for plastic receptacles or contents which are sensitive to heat.

Appendix A to Part 173. Appendix A, which provides a method of testing corrosion to skin, would be removed and reserved for consistency with proposed changes to the definition and packing group assignment for Class 8 materials.

Appendix E to Part 173. New criteria would be added for self-reactive materials possessing explosive properties, and an editorial change would be made to clarify that powders of metals or metal alloys that can be ignited are classified in Division 4.1.

Appendix F to Part 173. In paragraph 1., an editorial revision would be made to correctly reference Division 5.1.

Appendix H to Part 173. A new Appendix H would be added to Part 173 to provide a method of testing for combustibility. This method outlines a procedure for determining if a material can sustain combustion if heated under test conditions and exposed to an external source of flame.

Part 175

Section 175.10. The phrase "environmental restoration or protection" would be added as an exception in paragraph (a)(12) to clarify that certain aircraft operations pertaining to environmental restoration may be conducted under the provisions of this paragraph. Exceptions currently contained in paragraphs (a)(13) and (a)(17) for carbon dioxide (dry ice) would be consolidated into paragraph (a)(13) to except this material from regulation from Part 175 when it is used as a refrigerant for a package, intended for use in food or beverage service aboard an aircraft, or when used to pack perishables in carry-on baggage. Paragraph (a)(4) would be revised for consistency with the ICAO Technical Instructions which prohibit the carriage of undeclared flammable aerosols in checked or carry-on luggage. The carriage of such aerosols may create an unnecessary risk to ground handlers, passengers, and air crew members. In addition, a new paragraph (a)(26) would be added to except from regulation small medical or clinical mercury thermometers carried by passengers or crew members for personal use.

Section 175.33. Paragraph (a)(1) would be revised and a new paragraph (a)(9) would be added to require an aircraft operator, in the written notification to the pilot-in-command, to include a compatibility group letter for a Class 1 material and an air waybill number where one has been issued.

Part 176

Section 176.27. A new paragraph (c) would be added to reference a container packing certificate required under the provisions of the SOLAS Convention. (See discussion under § 171.12 of this section review for additional information.)

Section 176.76. A new paragraph (i) is being proposed for inclusion in § 176.76 to address the transport of fumigated transport units on vessels. These proposed fumigation requirements would be in addition to the fumigation requirements contained in § 173.9. The new vessel requirements are generally consistent with the IMDG Code requirements for transporting fumigated transport units and are consistent with Special Permits currently being issued

by the Coast Guard for U.S. maritime transport of fumigated transport units. Contrary to the IMDG Code but consistent with the UN Recommendations, RSPA is not proposing that fumigated units be treated as items of Class 9. If the proposed requirements for fumigated transport units on vessels are adopted in the final rule, a Special Permit issued by the Coast Guard would no longer be necessary.

Part 177

Section 177.841. Paragraph (e)(3) would be revised to specify requirements for separating Division 6.1 Packing Group III materials from foodstuffs, consistent with provisions in § 177.848.

Part 178

Section 178.2. Paragraph (a) would be revised to clarify that Part 178 requirements for UN standard packagings apply only to packagings manufactured in the U.S. See § 173.24(d)(2) for foreign-manufactured packagings. A new paragraph (e) would be added to include definitions for "manufacturer" and "specification markings." These new definitions would specify who is to be identified through a specification marking as the "manufacturer" and would clarify the manufacturer's responsibility under Part 178.

Section 178.3. The introductory text in paragraph (a) and the text in subparagraph (a)(2) would be revised editorially for clarity. A new marking provision would be added to paragraph (a)(4) to permit markings of an appropriate, rather than specific, size for packagings of 5 L (1 gallon) or 5 kg (11 pounds) or less capacity. Paragraph (b) would be revised to clarify the requirements for UN standard packagings marked in accordance with HMR requirements and UN standard packagings marked in accordance with the ICAO Technical Instructions or the IMDG Code.

Section 178.502. In paragraph (a) introductory text and paragraph (a)(1), the terms "type" or "types" of packagings would be amended for consistency with international regulations to read "kind" or "kinds" of packagings.

Section 178.503. Consistent with the UN Recommendations, RSPA is proposing revisions to certification marking requirements in this section. Each packaging certified to a UN standard is required to have a series of markings which describe the packaging and its characteristics. Paragraph (a) would be revised to require, for

packagings having a gross mass greater than 30 kg (66 pounds), that these markings appear on the top or side of the packaging. Currently, § 178.503 requires that metal or plastic drums or jerricans intended for reuse be marked with the minimum thickness of the packaging material. Consistent with the UN Recommendations, RSPA is proposing that metal drums and jerricans intended for reuse be marked with the nominal thickness. The nominal thickness marked would be in accordance with ISO 3574; that is, the nominal thickness marked could only exceed the actual minimum thickness of the packaging material by the tolerance specified in ISO 3574. Packagings to be reused would still be subject to the minimum thickness requirements of § 173.28. Because the eighth revised edition of the UN Recommendations did not address thickness requirements for plastic packagings, RSPA is proposing that plastic drums and jerricans intended for reuse continue to be marked with the minimum thickness of the packaging material.

In addition to the full marking on the top or side of a metal or plastic drum having a capacity greater than 100 liters and intended for reuse or reconditioning as a single packaging or the outer packaging of a composite packaging,

RSPA is proposing to require a permanent marking of the drum characteristics on the bottom of the drum. The country authorizing the mark, the name and address of the manufacturer, and the packaging thickness would not be required as part of this permanent mark. This marking would identify the packaging as it was originally manufactured, and could not necessarily be used to determine compliance with packaging requirements. For example, if a non-removable head drum had been converted to a removable head drum, this conversion would not be reflected in the marking on the bottom of the drum, but would be evident in the top or side marking. For drums marked permanently on the bottom, the top or side mark would not be required to be permanent (i.e., able to withstand the reconditioning process).

RSPA is proposing a new paragraph (d), which would specify additional requirements for markings on reconditioned metal drums. The paragraph would require that reconditioners reapply markings which no longer appear on drums after the reconditioning process. A reconditioner could duplicate the original markings or apply markings which reflect a lower performance level, but could not apply markings which identify a performance

level greater than that for which the original design type had been tested and marked.

Section 178.512. Standards for steel boxes and aluminum boxes would be consolidated by removing the distinction between unlined/uncoated steel or aluminum boxes and steel or aluminum boxes having an inner liner or coating. Therefore, both unlined and lined steel boxes would be identified as 4A and unlined and lined aluminum boxes would be identified as 4B. Corresponding revisions would be reflected in the packaging authorizations of Part 173.

Section 178.513. A new paragraph would be added to the standards for natural wood boxes to specify fastening requirements.

Section 178.516. In paragraph (b)(1), the reference to ISO Standard 535-1976(E) would be updated. Paragraph (b)(2) would be revised to authorize the ends of fiberboard boxes to be constructed of suitable materials other than wood, which is already authorized.

Section 178.521. In paragraph (b)(2), the term "water-resistant" would be revised to "waterproof" and examples of a waterproof ply or barrier would be provided.

Section 178.522. A composite packaging consisting of a plastic receptacle in a protective plastic drum is designated as 6HH in the current HMR standards. The UN Recommendations recently adopted a new composite packaging standard to authorize a plastic receptacle in a protective plastic box. Therefore, in paragraph (b)(3), the previous 6HH composite packaging would be redesignated as 6HH1 and the new composite packaging (the plastic receptacle in a protective plastic box) would be designated as 6HH2.

Section 178.601. Based on the merits of a petition (P-1195), paragraph (b) would be revised to limit the responsibility of shippers to those packaging assembly functions they actually perform or are responsible for performing. The petitioner claims that § 178.601(b) currently requires any shipper who closes a package to ensure that each package is capable of passing prescribed performance tests, thereby making the shipper legally responsible for every aspect of the manufacture and testing of the packaging. RSPA agrees, and is proposing a revision to paragraph (b)(2) to remove the shipper responsibility provision regarding packaging fabrication and testing functions not performed by the shipper. Paragraph (g)(2)(i) would be revised to clarify that selective testing under Variation 2 would require the fragile

inner packagings to contain liquids. A new sentence would be added to the end of paragraph (g)(2)(vi) to clarify that where outer packagings are not leakproof or siftproof and consequently require some type of leakproof liner, plastic bag or other means of containment, sufficient absorbent material must be placed inside the liner or bag. A new paragraph (k) would be added to permit several tests to be performed on one sample if the validity of test results is not affected and if approved by the Associate Administrator for Hazardous Materials Safety. Newly designated paragraph (l) would be revised to clarify recordkeeping requirements and provide consistency with test report requirements in the UN Recommendations.

Section 178.602. In paragraph (c) a reference to "§ 178.603(d)(2)" would be corrected to read "§ 178.603(e)".

Section 178.603. In paragraph (a), a new provision would be added to require that the drop test be performed using the package orientation most likely to result in failure if more than one orientation is possible. Paragraph (c) would be revised to clarify that the cold drop test outlined in this paragraph applies only to plastic packagings. A proposed revision to paragraph (f)(1) would clarify that inner packagings of combination packagings are not required to be vented to reach equilibrium after the drop test.

Section 178.604. For consistency with a change in the UN Recommendations, the length of time to conduct a leakproofness test, other than for production testing, would be specified as five minutes in revised paragraph (d).

Rulemaking Analyses and Notices

A. Executive Order 12866 and DOT Regulatory Policies and Procedures

This proposed rule is not considered a significant regulatory action under section 3(f) of Executive Order 12866 and therefore, was not reviewed by the Office of Management and Budget. The rule is not considered a significant rule under the Regulatory Policies and Procedures of the Department of Transportation [44 FR 11034]. A preliminary regulatory evaluation is available for review in the Docket.

B. Executive Order 12612

This proposed rule has been analyzed in accordance with the principles and criteria contained in Executive Order 12612 ("Federalism"). The Hazardous Materials Transportation Act contains an express preemption provision (49 App. U.S.C. 1804(a)(4)) that preempts

State, local, and Indian tribe requirements on certain covered subjects. Covered subjects are:

- (i) the designation, description, and classification of hazardous materials;
- (ii) the packing, repacking, handling, labeling, marking, and placarding of hazardous materials;
- (iii) the preparation, execution, and use of shipping documents pertaining to hazardous materials and requirements respecting the number, content, and placement of such documents;
- (iv) the written notification, recording, and reporting of the unintentional release in transportation of hazardous materials; or
- (v) the design, manufacturing, fabrication, marking, maintenance, reconditioning, repairing, or testing of a package or container which is represented, marked, certified, or sold as qualified for use in the transportation of hazardous materials.

This notice of proposed rulemaking addresses covered subjects under items i, ii, iii and v above and, if adopted as final, would preempt State, local, or Indian tribe requirements not meeting the "substantively the same" standard. The HMTA (49 App. U.S.C. 1804(a)(5), as amended, provides that if DOT issues a regulation concerning any of the covered subjects, after November 16, 1990, 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 [insert date six months after date of publication]. Thus, RSPA lacks discretion in this area, and preparation of a federalism assessment is not warranted.

C. Regulatory Flexibility Act

This proposed rule would incorporate changes introduced in the seventh and eighth revised editions of the UN Recommendations, the 1993-1994 and 1995-1996 ICAO Technical Instructions, and Amendments 26 and 27 to the IMDG Code. It would apply to

offerors and carriers of hazardous materials and would 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 proposed in this NPRM are not adopted. The proposed changes are intended to avoid this result. I certify that this proposal will not, if promulgated, have a significant economic impact on a substantial number of small entities. This certification is subject to modification as a result of a review of comments received in response to this proposal.

D. Paperwork Reduction Act

The requirements for information collection have been approved by the Office of Management and Budget (OMB) under the provisions of the Paperwork Reduction Act Of 1980 (Pub. L. 96-511) under OMB control number 2137-0034 for shipping papers and 2137-0557 for approvals.

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.

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

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

49 CFR Part 173

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

49 CFR Part 175

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

49 CFR Part 176

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

49 CFR Part 177

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

49 CFR Part 178

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

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

PART 171—GENERAL INFORMATION, REGULATIONS, AND DEFINITIONS

1. The authority citation for Part 171 would continue to read as follows:

Authority: 49 App. U.S.C. 1802, 1803, 1804, 1805, 1808, and 1818; 49 CFR part 1.

2. In the § 171.7(a)(3) Table, under the entry *American Society for Testing and Materials* a new entry would be added in numerical order; under the entry *International Organization for Standardization*, two new entries would be added at the end of existing entries; and a new entry would be added in alphabetical order, to read as follows:

§ 171.7 Reference material.

(a) * * *

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

Source and name of material	49 CFR reference
<i>American Society for Testing and Materials</i>	
ASTM G 31-72 Practice for Laboratory Immersion Corrosion Testing of Metals (Reapproved 1990)	173.137

Source and name of material	49 CFR reference
<i>International Organization for Standardization</i>	
ISO 3574-1986(E) Cold-reduced carbon steel sheet of commercial and drawing qualities	178.503
ISO 2592-1973 Petroleum Products—Determination of Flash and Fire Points Cleveland Cup Method, 1973	173.120
ISO 2604 (IV)-1975 Steel Products for Pressure Purposes—Plates	173.137
<i>Organization for Economic Cooperation and Development (OECD)</i>	
OECD Publications and Information Center, 2001 L Street, Suite 700, Washington, DC 20036	
OECD Guideline for Testing of Chemicals, No. 404 "Acute Dermal Irritation/Corrosion", 1992	173.136

§ 171.7 [Amended]

3. In addition, in § 171.7, in the table in paragraph (a)(3), the following changes would be made:

a. In the entry ASTM D 56-79, the wording "D 56-79" would be revised to read "D 56-87".

b. In the entry ASTM D 93-80, the wording "D 93-80" would be revised to read "D 93-90".

c. In the entry ASTM D 3278-78, the wording "D 3278-78" would be revised to read "ASTM D 3278-89".

d. In the entry ASTM D 4359-84, the wording "D 4359-84" would be revised to read "ASTM D 4359-90".

e. Under International Civil Aviation Organization (ICAO), for the entry "Technical Instructions for the Safe Transport of Dangerous Goods by Air", the date "1993-1994" would be revised to read "1995-1996".

f. Under International Maritime Organization (IMO), the entry "International Maritime Dangerous Goods (IMDG) Code, 1990 Consolidated Edition, as amended by Amendment 26 thereto" would be amended by removing the wording "Amendment 26" and replacing it with "Amendment 27".

g. Under International Organization for Standardization, the words "ISO-535-1976(E)" would be revised to read "ISO-535-1991(E)".

h. Under Transport Canada, the entry "Transportation of Dangerous Goods Regulations, as of July 1, 1985, incorporating Registration Numbers SOR/85-77, SOR/85-585 and SOR/85-609" would be revised to read "Transportation of Dangerous Goods Regulations, 1 July 1985, SOR/85/77, incorporating the following Registration Numbers: SOR/85-314, SOR/85-585, SOR/85-609, SOR/86-526, SOR/88-635, SOR/87-335, SOR/87-186, SOR/89-39, SOR/89-294, SOR/90-847, SOR/91-711, SOR/91-712, SOR/92-447, SOR/92-600, SOR/93-203, SOR/93-274, SOR/93-525, SOR/94-146 and SOR/94-264".

i. Under United Nations, for the entry "UN Recommendations on the Transport of Dangerous Goods, Sixth Revised Edition (1989)" the wording "Sixth Revised Edition (1989)" would be revised to read "Eighth Revised Edition (1993)".

j. Under United Nations, for the entry "UN Recommendations on the Transport of Dangerous Goods, Tests and Criteria", in column 2, the references "173.124;" "173.128;" "173.166;" and "173.185" would be added in appropriate numerical order.

4. In § 171.8, the following definitions would be added or revised, as indicated, in appropriate alphabetical order to read as follows:

§ 171.8 Definitions and abbreviations.

[Add:]

Asphyxiant gas means a gas which dilutes or replaces oxygen normally in the atmosphere.

Gas means a material which, at a standard pressure of 101.3 kPa (14.7 psi), has a vapor pressure greater than 300 kPa (43.5 psi) at 50 °C (122 °F) or is completely gaseous at 20 °C (68 °F).

Siftproof packaging means a packaging impermeable to dry contents, including fine solid material produced during transportation.

[Revise:]

Box means a packaging with complete rectangular or polygonal faces, made of metal, wood, plywood, reconstituted wood, fiberboard, plastic, or other suitable material. Small holes for purposes such as ease of handling or opening, or to meet classification requirements, are permitted as long as they do not compromise the integrity of the packaging during transportation,

and are not otherwise prohibited in this subchapter.

Liquid means a material, other than an elevated temperature material, with a melting point or initial melting point of 20 °C (68 °F) or lower at a standard pressure of 101.3 kPa (14.7 psi). A viscous material for which a specific melting point cannot be determined must be subjected to the procedures specified in ASTM D 4359-90 "Standard Test Method for Determining Whether a Material is Liquid or Solid".

Overpack, except as provided in subpart K of part 178 of this subchapter, means an enclosure that is used by a single consignor to provide protection or convenience in handling of a package or to consolidate two or more packages. *Overpack* does not include a transport vehicle, freight container, or aircraft unit load device. Examples of overpacks are one or more packages:

- (1) Placed or stacked onto a load board such as a pallet and secured by strapping, shrink wrapping, stretch wrapping, or other suitable means; or
- (2) Placed in a protective outer packaging such as a box or crate.

Solid means a material which is not a gas or a liquid.

UN standard packaging means a packaging conforming to standards in the UN Recommendations on the Transport of Dangerous Goods.

§ 171.11 [Amended]

5. In § 171.11, in the last sentence of paragraph (d)(5), the wording "Poison" would be revised to read "Poison" or "Toxic".

§ 171.12 [Amended]

6. In § 171.12, the following changes would be made:

a. In paragraph (b) introductory text, in the second sentence, the wording

"stowed and segregated, and certified in accordance with the IMDG Code" would be revised to read "stowed and segregated, and certified (including a container packing certification, if applicable) in accordance with the IMDG Code".

b. In the first sentence of paragraph (c) introductory text, the wording "being imported into or exported from the United States or" would be removed.

§ 171.14 [Amended]

7. In § 171.14, paragraph (c)(3) would be removed.

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

8. The authority citation for part 172 would continue to read as follows:

Authority: 49 App. U.S.C. 1803, 1804, 1805, 1808; 49 CFR part 1, unless otherwise noted.

9. In § 172.101, paragraphs (c)(3), (c)(13) and (k)(1) through (k)(5) would be revised and, in paragraph (g), a new sentence would be added as the last sentence to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

(c) * * *

(3) The word "poison" or "poisonous" may be used interchangeably with the word "toxic"

when only domestic transportation is involved. The abbreviation "n.o.i." or "n.o.i.b.n." may be used interchangeably with "n.o.s.".

* * * * *

(13) *Self-reactive materials and organic peroxides.* Generic proper shipping names for self-reactive materials and organic peroxides, as listed in Column 2 of the Table, must be selected based on the material's technical name and concentration, in accordance with the provisions of §§ 173.224 or 173.225 of this subchapter, respectively.

* * * * *

(g) * * * No label is required for a material classed as a combustible liquid or for a Class 3 material that is reclassified as a combustible liquid.

* * * * *

(k) * * *

(1) Stowage category "A" means the material may be stowed "on deck" or "under deck" on a passenger or cargo vessel.

(2) Stowage category "B" means—
(i) The material may be stowed "on deck" or "under deck" on a cargo vessel;

(ii) The material may be stowed "under deck" on a passenger vessel carrying not more than 25 passengers or, alternatively, one passenger per each three meters of overall vessel length, whichever is larger; and

(iii) "On deck only" on passenger vessels in which the number of passengers specified in paragraph (k)(2)(ii) of this section is exceeded.

(3) Stowage category "C" means the material must be stowed "on deck only" on a cargo vessel and on a passenger vessel.

(4) Stowage category "D" means material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each three meters of overall vessel length, but is prohibited on passenger vessels in which the limiting number of passengers is exceeded.

(5) Stowage category "E" means material may be stowed "on deck" or "under deck" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each three meters of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.

* * * * *

§ 172.101 [Amended]

10. In addition, in § 172.101, in paragraph (c)(12)(iii), the last sentence would be removed.

11. In § 172.101, the Hazardous Materials Table would be revised to read as follows:

§ 172.101 Purpose and use of hazardous materials table.

* * * * *

\$172.101 HAZARDOUS MATERIALS TABLE—Continued

Symbol	Hazardous materials descriptions and proper shipping names	Hazard class or Division	Identification Numbers	Packaging group	Label(s) required (if not excepted)	Special provisions	Packaging authorization (173.201)			Quantity limitations		Vessel stowage requirements	
							Excep-tions	Non-bulk pack-aging	Bulk pack-aging	Passenger aircraft or railcar	Cargo air-craft only	Vessel stow-age	Other stow-age provi-sions
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8A)	(8B)	(8C)	(9A)	(9B)	(10A)	(10B)
	Tripropylamine	3	UN2280	III	FLAMMABLE LIQUID, CORROSIVE.	B1, T8	180	203	242	5 L	60 L	A	40
	Tripropylene	3	UN2057	II	FLAMMABLE LIQUID	T1	180	202	242	5 L	60 L	B	
	Tris-(1-oxiridinyl) phosphine oxide, solution	6.1	UN2501	II	POISON	B1, T1	180	203	242	60 L	220 L	A	
				III	KEEP AWAY FROM FOOD.	T8	None	202	243	5 L	60 L	A	
				III	KEEP AWAY FROM FOOD.	T7	153	203	241	60 L	220 L	A	
	Tris, bis-bisfluoromino diethoxy propene (TVOPA)	Forbidden											
	Trisphenol	1.1D	UN0380	I	EXPLOSIVE 1.1D		None	82	None	Forbidden	Forbidden	B	1E, 5E
	Tungsten hexafluoride	2.3	UN2196		POISON GAS, CORROSIVE.	3	None	338	None	Forbidden	Forbidden	D	40
	Turpentine	3	UN1288	III	FLAMMABLE LIQUID	B1, T1	180	203	242	60 L	220 L	A	
	Turpentine substitute	3	UN1300	I	FLAMMABLE LIQUID	T1	None	201	243	1 L	30 L	B	
				II	FLAMMABLE LIQUID	T1	180	202	242	5 L	60 L	B	
				III	FLAMMABLE LIQUID	B1, T1	180	203	242	60 L	220 L	A	
	Undecene	3	UN2530	III	FLAMMABLE LIQUID	B1, T1	180	203	242	60 L	220 L	A	
	Uranium hexafluoride, fissile excepted or non-fissile	7	UN2876		RADIOACTIVE, CORROSIVE.		421-2	420	420				
								426	426				
	Uranium hexafluoride, fissile (with more than 1 percent U-235)	7	UN2877		RADIOACTIVE, CORROSIVE.		453	417	420			A	
	Uranium metal, pyrophoric	7	UN2879		RADIOACTIVE, SPONTANEOUSLY COMBUSTIBLE.		None	418	None			D	
	Uranium nitrate hexahydrate solution	7	UN2980		RADIOACTIVE, CORROSIVE.		421, 425	416	416			D	
								417	417				
	Uranium nitrate, solid	7	UN2981		RADIOACTIVE, OXIDIZER.		None	419	None	Forbidden	15 kg	A	
	Urea hydrogen peroxide	5.1	UN1811	III	OXIDIZER, CORROSIVE	A1, A7, A29	182	213	240	25 kg	100 kg	A	13
	Urea nitrate, dry or wetted with less than 20 percent water, by mass	1.1D	UN0320	I	EXPLOSIVE 1.1D		None	82	None	Forbidden	Forbidden	B	1E, 5E
	Urea nitrate, wetted with not less than 20 percent water, by mass	4.1	UN1367	I	FLAMMABLE SOLID	38, A8, A18, N41	None	211	None	1 kg	15 kg	A	28
	Urea peroxide, see Urea hydrogen peroxide												
	Valeraldehyde	3	UN2058	II	FLAMMABLE LIQUID	T1	180	202	242	5 L	60 L	B	
	Valeric acid, see Corrosive liquids, n.o.s.												
	Valeryl chloride	6	UN2602	II	CORROSIVE, FLAMMABLE LIQUID.	A3, A6, A7, B2, N34, T8.	184	202	243	1 L	30 L	C	40
	Vanadium compound, n.o.s.	6.1	UN3386	I	POISON	T14	None	211	242	5 kg	60 kg	B	
				II	POISON	T14	None	212	242	25 kg	100 kg	B	
				III	KEEP AWAY FROM FOOD.	T7	183	213	240	100 kg	200 kg	A	
	Vanadium oxytrichloride	6	UN2448	II	CORROSIVE	A3, A6, A7, B2, B16, N34, T8, T26.	184	202	242	Forbidden	30 L	C	40
	Vanadium pentoxide, non-fused form	6.1	UN2682	I	POISON		None	212	242	25 kg	100 kg	A	
	Vanadium tetrachloride	6	UN2444	I	CORROSIVE	A3, A6, A7, B4, N34, T8, T26.	None	901	843	Forbidden	2.5 L	C	40
	Vanadium trichloride	6	UN2478	III	CORROSIVE		184	219	840	25 kg	100 kg	A	40
	Vanadyl sulfate	6.1	UN2831	II	POISON		None	212	242	25 kg	100 kg	A	
	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												
	Very signal cartridges, see Cartridges, signal												
	Vinyl acetate, inhibited	3	UN1301	II	FLAMMABLE LIQUID	T8	180	202	242	5 L	60 L	B	
	Vinyl bromide, inhibited	2.1	UN1085		FLAMMABLE GAS		306	304	314, 315	Forbidden	150 kg	B	40
	Vinyl butyrate, inhibited	3	UN2638	II	FLAMMABLE LIQUID	T7	180	202	242	5 L	60 L	B	
	Vinyl chloride, inhibited or Vinyl chloride, stabilized	3.1	UN1088		FLAMMABLE GAS	B44	306	304	314, 315	Forbidden	150 kg	B	40
	Vinyl chloroacetate	6.1	UN2698	II	POISON, FLAMMABLE LIQUID.	T14	None	202	243	5 L	60 L	A	
	Vinyl ethyl ether, inhibited	3	UN1302	I	FLAMMABLE LIQUID	A3, T14	None	201	243	1 L	30 L	D	
	Vinyl fluoride, inhibited	2.1	UN1880		FLAMMABLE GAS	B43	306	304	314, 315	Forbidden	150 kg	E	40
	Vinyl isobutyl ether, inhibited	3	UN1304	II	FLAMMABLE LIQUID	T8	180	202	242	5 L	60 L	B	