

## Appendix A Hazardous Materials Table: Postal Service Mailability Guide

The mailing information in this table is based on the online DOT Hazardous Materials Table in 49 CFR 172.101 (dated December 30, 2013). The information is modified to identify the mailability of each hazardous material based on Postal Service mailing regulations. This table identifies the mailability of hazardous materials for *domestic mail only*. Almost no hazardous materials are permitted in international mail. For information on mailability in international mail, see Chapter 6 and Exhibit 621.1.

In the domestic mail, generally only those hazardous materials that can be reclassified as an ORM-D material and renamed with the proper shipping name of "Consumer Commodity" are eligible for mailing subject to the postal quantity limitations. The only exceptions are for the small number of materials listed in 322.

The columns in the table contain the following information:

**Column (a):** Lists the proper shipping name of the hazardous material in roman type. Text that appears in *italic* type is not part of the proper shipping name of the hazardous material and is listed for descriptive or reference purposes. Some listings direct the user to the preferred proper shipping name of a material listed elsewhere in the table. The text in this column closely matches the information in Column 2 of the Hazardous Materials Table in 49 CFR 172.101.

**Column (b):** Lists the assigned hazard class or division of the hazardous material. The entry "Forbidden" means the material may not be transported under any circumstances. The entry "n/a" means the material does not have an assigned hazard class. If the field is blank, refer to the listing for the preferred proper shipping name cited in Column (a). The text in this column closely matches the information in Column 3 of the Hazardous Materials Table in 49 CFR 172.101.

**Column (c):** Lists the identification (ID) number assigned to the hazardous material. The number may be either a United Nations (UN) number or a North American (NA) number. This field is blank if Column (a) directs the user to the listing for the preferred proper shipping name of the material, or if the entry in Column (b) is "Forbidden." The text in this column closely matches the information in Column 4 of the Hazardous Materials Table in 49 CFR 172.101.

**Column (d):** Lists the DOT Packing Group (PG) assignment for the hazardous material. Not all hazard classes have DOT Packing Group assignments. If this field contains "n/a," the material is in a hazard class that does not use Packing Group assignments. This field is blank if Column (a) directs the user to the listing for the preferred proper shipping name of the material, or if the entry in Column (b) is "Forbidden." The text in this column closely matches the information in Column 5 of the Hazardous Materials Table in 49 CFR 172.101.

**Column (e):** Lists the mailability of the hazardous material according to Postal Service regulations. If the entry is "Prohibited," the material is nonmailable. If the entry cites a reference to this publication or the DMM, the material is subject to those requirements and restrictions. If the entry is "Only ORM-D," the material is mailable only if it can be reclassified as an ORM-D material and renamed with the proper shipping name of "Consumer Commodity" as permitted in 49 CFR. Mailable ORM-D materials cannot exceed the postal quantity limits specified in this publication. The mailer is responsible for correctly determining if the hazardous material is eligible to be reclassified as an ORM-D material. If assistance is needed, the mailer may request a ruling from the PCSC as provided in 215.2. If the hazardous material is mailable in the domestic mail, refer to Column (f) and (g), as appropriate, to determine the applicable postal packaging instruction in Appendix C.

**Column (f):** Lists the USPS packaging instruction in Appendix C that must be followed if the hazardous material is permitted in domestic mail via air transportation. This field is blank if Column (a) directs the user to the listing for the preferred proper shipping name of the material, or if the hazardous material is prohibited from mailing as designated in Column (e). If the entry in this column is "Prohibited," the material is not permitted in domestic mail via air transportation.

**Column (g):** Lists the USPS packaging instruction in Appendix C that must be followed if the hazardous material is permitted in domestic mail via surface transportation. This field is blank if Column (a) directs the user to the listing for the preferred proper shipping name of the material, or if the hazardous material is prohibited from mailing as designated in Column (e). If the entry in this column is "Prohibited," the material is not permitted in domestic mail via surface transportation.

Hazardous Materials Descriptions and Proper Shipping Names (a)	Hazard Class (b)	ID Number (c)	DOT PG (d)	USPS Mailability (e)	Domestic Mail	
					Domestic Mail Air (f)	Surface Mail (g)
<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>
<i>Accelerene, see p-Nitrosodimethylaniline</i>						
<i>Accumulators, electric, see Batteries, wet etc.</i>						
<i>Accumulators, pressurized, pneumatic or hydraulic (containing nonflammable gas), see Articles pressurized, pneumatic or hydraulic (containing nonflammable gas)</i>						
Acetal	3	UN1088	II	Only ORM-D	Prohibited	3A
Acetaldehyde	3	UN1089	I	Prohibited		
Acetaldehyde ammonia	9	UN1841	III	Only ORM-D or Consumer Commodity	9C	9C
Acetaldehyde oxime	3	UN2332	III	Only ORM-D	Prohibited	3A
Acetic acid, glacial or Acetic acid solution, with more than 80 percent acid, by mass	8	UN2789	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Acetic acid solution, not less than 50 percent but not more than 80 percent acid, by mass	8	UN2790	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Acetic acid solution, with more than 10 percent and less than 50 percent acid, by mass	8	UN2790	III	Only ORM-D or Mailable Limited Quantity	8A	8A
Acetic anhydride	8	UN1715	II	Only ORM-D or Mailable Limited Quantity	8A	8A

Acetone	3	UN1090	II	Only ORM-D	Prohibited	3A
Acetone cyanohydrin, stabilized	6.1	UN1541	I	Prohibited		
Acetone oils	3	UN1091	II	Only ORM-D	Prohibited	3A
Acetonitrile	3	UN1648	II	Only ORM-D	Prohibited	3A
Acetyl acetone peroxide with more than 9 percent by mass active oxygen	Forbidden			Prohibited		
Acetyl benzoyl peroxide, solid, or with more than 40 percent in solution	Forbidden			Prohibited		
Acetyl bromide	8	UN1716	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Acetyl chloride	3	UN1717	II	Prohibited		
Acetyl cyclohexanesulfonyl peroxide, with more than 82 percent wetted with less than 12 percent water	Forbidden			Prohibited		
Acetyl iodide	8	UN1898	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Acetyl methyl carbinol	3	UN2621	III	Only ORM-D	Prohibited	3A
Acetyl peroxide, solid, or with more than 25 percent in solution	Forbidden			Prohibited		
Acetylene, dissolved	2.1	UN1001	n/a	Prohibited		
Acetylene (liquified)	Forbidden			Prohibited		
Acetylene silver nitrate	Forbidden			Prohibited		
Acetylene, solvent free	Forbidden			Prohibited		
Acetylene tetrabromide, see Tetrabromoethane						
Acid butyl phosphate, see Butyl acid phosphate						
Acid, sludge, see Sludge, acid						
Acridine	6.1	UN2713	III	Only ORM-D or Consumer Commodity	6A	6A
Acrolein dimer, stabilized	3	UN2607	III	Only ORM-D	Prohibited	3A
Acrolein, stabilized	6.1	UN1092	I	Prohibited		
Acrylamide, solid	6.1	UN2074	III	Only ORM-D or Consumer Commodity	6A	6A
Acrylamide, solution	6.1	UN3426	III	Only ORM-D or Consumer Commodity	6A	6A
Acrylic acid, stabilized	8	UN2218	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Acrylonitrile, stabilized	3	UN1093	I	Prohibited		
Actuating cartridge, explosive, see Cartridges, power device						
Adhesives, containing a flammable liquid	3	UN1133	I, II, III	Only ORM-D	Prohibited	3A
Adiponitrile	6.1	UN2205	III	Only ORM-D or Consumer Commodity	6A	6A
Aerosols, corrosive, Packing Group II or III, (each not exceeding 1 L capacity)	2.2	UN1950	n/a	Only ORM-D or Consumer Commodity	2B	2B
Aerosols, flammable (each not exceeding 1 L capacity)	2.1	UN1950	n/a	Only ORMD	Prohibited	2A
Aerosols, flammable, n.o.s. (engine starting fluid) (each not exceeding 1 L capacity)	2.1	UN1950	n/a	Only ORM-D	Prohibited	2A
Aerosols, nonflammable (each not exceeding 1 L capacity)	2.2	UN1950	n/a	Only ORM-D or Consumer Commodity	2B	2B
Aerosols, poison, each not exceeding 1 L capacity	2.2	UN1950	n/a	Only ORM-D or Consumer Commodity	2B	2B
Air bag inflators, or Air bag modules, or Seatbelt pretensioners	1.4G	UN0503	II	Prohibited		
Air bag inflators, or Air bag modules, or Seatbelt pretensioners	9	UN3268	III	Prohibited		
Air, compressed	2.2	UN1002	n/a	Only ORM-D or Consumer Commodity	2B	2B
Air, refrigerated liquid (cryogenic liquid)	2.2	UN1003	n/a	Prohibited		
Air, refrigerated liquid (cryogenic liquid), nonpressurized	2.2	UN1003	n/a	Prohibited		
Aircraft engines (including turbines), see Engines, internal combustion						
Aircraft evacuation slides, see Lifesaving appliances etc.						

Magnesium hydride	4.3	UN2010	I	Prohibited		
Magnesium nitrate	5.1	UN1474	III	Only ORM-D or Mailable Limited Quantity	5A	5A
Magnesium perchlorate	5.1	UN1475	II	Only ORM-D or Mailable Limited Quantity	5A	5A
Magnesium peroxide	5.1	UN1476	II	Only ORM-D or Mailable Limited Quantity	5A	5A
Magnesium phosphide	4.3	UN2011	I	Prohibited		
Magnesium, powder or Magnesium alloys, powder	4.3	UN1418	I	Prohibited		
Magnesium, powder or Magnesium alloys, powder	4.3	UN1418	II, III	Prohibited		
<i>Magnesium scrap, see Magnesium etc. (UN1869)</i>						
Magnesium silicide	4.3	UN2624	II	Prohibited		
Maleic anhydride	8	UN2215	III	Only ORM-D or Mailable Limited Quantity	8A	8A
Maleic anhydride, molten	8	UN2215	III	Prohibited		
Malononitrile	6.1	UN2647	II	Prohibited		
<i>Mancozeb (manganese ethylenebisdithiocarbamate complex with zinc) see Maneb etc.</i>						
Maneb or Maneb preparations with not less than 60 percent maneb	4.2	UN2210	III	Prohibited		
Maneb stabilized or Maneb preparations, stabilized against self-heating	4.3	UN2968	III	Prohibited		
Manganese nitrate	5.1	UN2724	III	Only ORM-D or Mailable Limited Quantity	5A	5A
Manganese resinate	4.1	UN1330	III	Only ORM-D	Prohibited	4A
Mannitan tetranitrate	Forbidden			Prohibited		
Mannitol hexanitrate (dry)	Forbidden			Prohibited		
Mannitol hexanitrate, wetted or Nitromannite, wetted with not less than 40 percent water, or mixture of alcohol and water, by mass	1.1D	UN0133	II	Prohibited		
<i>Marine pollutants, liquid or solid, n.o.s., see Environmentally hazardous substances, liquid or solid, n.o.s.</i>						
<i>Matches, block, see Matches, strike anywhere</i>						
Matches, fusee	4.1	UN2254	III	Prohibited		
Matches, safety (book, card, or strike on box)	4.1	UN1944	III	Mailable per 344.22	Prohibited	4B
Matches, strike anywhere	4.1	UN1331	III	Prohibited		
Matches, wax, Vesta	4.1	UN1945	III	Prohibited		
<i>Matting acid, see Sulfuric acid etc.</i>						
Medicine, liquid, flammable, toxic, n.o.s.	3	UN3248	II	Prohibited		
Medicine, liquid, flammable, toxic, n.o.s.	3	UN3248	III	Only ORM-D	Prohibited	3A
Medicine, liquid, toxic, n.o.s.	6.1	UN1851	II, III	Only ORM-D or Consumer Commodity	6A	6A
Medicine, solid, toxic, n.o.s.	6.1	UN3249	II, III	Only ORM-D or Consumer Commodity	6A	6A
<i>Memtetrahydrophthalic anhydride, see Corrosive liquids, n.o.s.</i>						
Mercaptans, liquid, flammable, n.o.s. or Mercaptan mixture, liquid, flammable, n.o.s.	3	UN3336	I, II, III	Only ORM-D	Prohibited	3A
Mercaptans, liquid, flammable, toxic, n.o.s. or Mercaptan mixtures, liquid, flammable, toxic, n.o.s.	3	UN1228	II	Prohibited		
Mercaptans, liquid, flammable, toxic, n.o.s. or Mercaptan mixtures, liquid, flammable, toxic, n.o.s.	3	UN1228	III	Only ORM-D	Prohibited	3A
Mercaptans, liquid, toxic, flammable, n.o.s. or Mercaptan mixtures, liquid, toxic, flammable, n.o.s., flashpoint not less than 23° C	6.1	UN3071	II	Prohibited		
5-Mercaptotetrazol-1-acetic acid	1.4C	UN0448	II	Prohibited		
Mercuric arsenate	6.1	UN1623	II	Prohibited		
Mercuric chloride	6.1	UN1624	II	Prohibited		
<i>Mercuric compounds, see Mercury compounds, etc.</i>						
Mercuric nitrate	6.1	UN1625	II	Prohibited		
Mercuric potassium cyanide	6.1	UN1626	I	Prohibited		

Petroleum crude oil	3	UN1267	I	Prohibited		
Petroleum crude oil	3	UN1267	II, III	Only ORM-D	Prohibited	3A
Petroleum distillates, n.o.s. or Petroleum products, n.o.s.	3	UN1268	I, II, III	Only ORM-D	Prohibited	3A
Petroleum gases, liquified or Liquefied petroleum gas	2.1	UN1075	n/a	Only ORM-D	Prohibited	2A
Petroleum oil	3	NA1270	I	Prohibited		
Petroleum oil	3	NA1270	II, III	Only ORM-D	Prohibited	3A
Petroleum sour crude oil, flammable, toxic	3	UN3494	I, II, III	Prohibited		
Phenacyl bromide	6.1	UN2645	II	Prohibited		
Phenetidines	6.1	UN2311	III	Only ORM-D or Consumer Commodity	6A	6A
Phenol, molten	6.1	UN2312	II	Prohibited		
Phenol, solid	6.1	UN1671	II	Prohibited		
Phenol solutions	6.1	UN2821	II	Prohibited		
Phenol solutions	6.1	UN2821	III	Only ORM-D or Consumer Commodity	6A	6A
Phenolsulfonic acid, liquid	8	UN1803	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Phenoxyacetic acid derivative pesticide, liquid, flammable, toxic <i>flashpoint less than 23° C</i>	3	UN3346	I, II	Prohibited		
Phenoxyacetic acid derivative pesticide, liquid, toxic	6.1	UN3348	I	Prohibited		
Phenoxyacetic acid derivative pesticide, liquid, toxic	6.1	UN3348	II, III	Only ORM-D or Consumer Commodity	6A	6A
Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable, <i>flashpoint not less than 23° C</i>	6.1	UN3347	I	Prohibited		
Phenoxyacetic acid derivative pesticide, liquid, toxic, flammable, <i>flashpoint not less than 23° C</i>	6.1	UN3347	II, III	Only ORM-D or Consumer Commodity	6A	6A
Phenoxyacetic acid derivative pesticide, solid, toxic	6.1	UN3345	I	Prohibited		
Phenoxyacetic acid derivative pesticide, solid, toxic	6.1	UN3345	II, III	Only ORM-D or Consumer Commodity	6A	6A
Phenyl chloroformate	6.1	UN2746	II	Prohibited		
Phenyl isocyanate	6.1	UN2487	I	Prohibited		
Phenyl mercaptan	6.1	UN2337	I	Prohibited		
Phenyl phosphorus dichloride	8	UN2798	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Phenyl phosphorus thiodichloride	8	UN2799	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Phenyl urea pesticides, liquid, toxic	6.1	UN3002	I, II	Prohibited		
Phenyl urea pesticides, liquid, toxic	6.1	UN3002	III	Only ORM-D or Consumer Commodity	6A	6A
Phenylacetonitrile, liquid	6.1	UN2470	III	Only ORM-D or Consumer Commodity	6A	6A
Phenylacetyl chloride	8	UN2577	II	Only ORM-D or Mailable Limited Quantity	8A	8A
Phenylcarbylamine chloride	6.1	UN1672	I	Prohibited		
<i>m</i> -Phenylene diaminediperchlorate (dry)	Forbidden			Prohibited		
Phenylenediamines ( <i>o</i> -; <i>m</i> -; <i>p</i> -)	6.1	UN1673	III	Only ORM-D or Consumer Commodity	6A	6A
Phenylhydrazine	6.1	UN2572	II	Prohibited		
Phenylmercuric acetate	6.1	UN1674	II	Prohibited		
Phenylmercuric compounds, n.o.s.	6.1	UN2026	I, II	Prohibited		
Phenylmercuric compounds, n.o.s.	6.1	UN2026	III	Only ORM-D or Consumer Commodity	6A	6A
Phenylmercuric hydroxide	6.1	UN1894	II	Prohibited		

## 342 Gases (Hazard Class 2)

### 342.1 Definition

Hazard Class 2 consists of three divisions:

- Division 2.1, Flammable Gases.** A material that is a gas at 68° F (20° C) or less and 14.7 psi (101.3 kPa) of pressure. Flammable gases also include materials that have a boiling point of 68° F (20° C) or less at 14.7 psi (101.3 kPa) and that are ignitable at 14.7 psi (101.3 kPa) when in a mixture of 13 percent or less by volume with air or that have a flammable range at 14.7 psi (101.3 kPa) with air of at least 12 percent regardless of the lower limit. These conditions must be established in accordance with ASTM E681–85, *Standard Test Method for Concentration Limits of Flammability of Chemicals*, or other approved equivalent method. The flammability of aerosols must be determined using the tests specified in 49 CFR 173.306(i).
- Division 2.2, Nonflammable, Nontoxic Gases.** A material that does not meet the definition of Division 2.1 or 2.3 and exerts in its packaging an absolute pressure of 40.6 psia (280 kPa) or greater at 68° F (20° C).
- Division 2.3, Toxic Gases.** A material that is poisonous by inhalation and is a gas at 68° F (20° C) or less and a pressure of 14.7 psi (101.3 kPa), or a material that has a boiling point of 68° F (20° C) or less at 14.7 psi (101.3 kPa).

### 342.2 Mailability

The following conditions apply to the mailing of gases:

- International Mail.** All gases are prohibited.
- Domestic Mail via Air Transportation.** Flammable gases in Division 2.1 and toxic gases in Division 2.3 are prohibited. Nonflammable gases in Division 2.2 are generally permitted if the material can qualify as a consumer commodity material and meet the quantity limitations and packaging requirements in 342.3 and 342.4.
- Domestic Mail via Surface Transportation.** Toxic gases in Division 2.3 are prohibited. Flammable gases in Division 2.1 and nonflammable gases in Division 2.2 are generally permitted if the material can qualify as an ORM–D material and meet the quantity limitations and packaging requirements in 342.3 and 342.4.

#### 342.21 Nonmailable Gases

When any gas that is nonmailable is discovered in the mailstream, the procedures in POM 139.117 must be followed if the materials present an immediate threat to persons or property. The procedures in POM 139.118 are followed when there is no immediate threat to persons or property.

The following are some specific types of nonmailable gases:

- Cigarette Lighters (NA1057).** Generally, lighters charged with fuel and having an ignition system or any similar heating, lighting, or ignition device are a Class 3 flammable liquid and are nonmailable. However, if an approval number is obtained from DOT, consideration for mailing may be requested from the manager, PCSC under the provisions in 343.25.
- Oxygen, Refrigerated Liquid.** Liquid oxygen (UN1073) is prohibited from mailing under any circumstances.
- Fire Extinguishers.** Fire extinguishers (UN0275, UN0276, UN0323, or UN0381) that contain propellant explosives are prohibited from mailing.  
**Note:** See 342.22 for mailable types of fire extinguishers.
- Toxic Gases.** All Division 2.3 toxic gases are prohibited from mailing.

#### 342.22 Mailable Gases

The following are examples of mailable gases:

- Butane.** Butane (UN1011) and Receptacles, small (UN2037) with butane or butane mixtures are Division 2.1 flammable gases. Butane gases that can qualify as ORM–D materials are acceptable only in domestic mail via surface transportation when properly prepared under 342.3 and Packaging Instruction 2A in Appendix C.
- Oxygen, Compressed.** Oxygen (UN1072) is a Division 2.2 nonflammable gas and is acceptable in domestic mail only if it can be reclassified as a consumer commodity material (for air or surface), or ORM–D (for surface only). The requirements in 342.3 and Packaging Instruction 2B in Appendix C must be followed.
- Propane.** Propane is a Division 2.1 flammable gas and is acceptable in domestic mail via surface transportation only if it can be reclassified as an ORM–D material. The requirements in 342.3 and Packaging Instruction 2A in Appendix C must be followed. Propane is nonmailable in domestic mail via air transportation.
- Fire Extinguishers.** Extinguishers that contain a Division 2.2 nonflammable compressed gas and are assigned UN1044 are mailable if they do not contain methyl bromide gas mixtures and the contents are held in DOT specification 2P or 2Q containers. Only one extinguisher per mailpiece is permitted, and the compressed gas contained within the fire extinguisher must be nonflammable, nonpoisonous, or noncorrosive as required under 49 CFR 173.309(a). The requirements in Packaging Instruction 2B in Appendix C must be followed.  
**Note:** Fire extinguishers assigned UN1774 are mailable as Class 8 corrosives subject to the limitations for corrosives in 348.
- Empty Compressed Gas Containers.** Empty used containers of compressed gas are mailable subject to the same restrictions that applied when the container was filled (because residual amounts of the hazardous material might remain present). Empty, unused (i.e., new) containers are mailable without restriction.
- Aerosol Paint Products.** Aerosol paint products that are defined as flammable compressed gases are acceptable in the domestic mail via surface transportation only if they can qualify as ORM–D materials and meet the quantity limitations and applicable packaging requirements in 342.3 and 342.4.
- Other Mailable Gases.** Materials whose contents are under pressure, such as carbonated beverages, biological/medical products, cosmetics, foodstuffs and soaps, electronic tubes, and audible fire alarm systems (except for any that may contain poisonous gases or others that may be specifically excluded by 49 CFR 173.306), are acceptable in the domestic mail as follows:
  - Carbonated Beverages.** These items are not regulated as hazardous materials and are acceptable without restriction. Carbonated beverages must be properly packaged under DMM 601.1-7.

Bug Spray  
Stove Fuel

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## USPS Packaging Instruction 2A

### Flammable Gases

A Class 2 flammable gas that qualifies as a consumer commodity or ORM-D material is mailable provided that all applicable requirements in 342 are met and it is properly packaged as follows.

#### Proper Shipping Name

- Consumer Commodity.

#### ID Number

- Various (see Appendix A).

#### Mailability

- International Mail: Prohibited.
- Domestic Mail: Permitted only via surface transportation.

### Required Packaging

#### Primary Receptacle

- The capacity of an other-than-metal (nonmetal) primary receptacle must be 4 fluid ounces (7.22 cubic inches) or less per mailpiece.
- The capacity of a metal primary receptacle must be 33.8 fluid ounces (1-liter or 61.0 cubic inches) or less per mailpiece.
- The liquid content of the material and the gas must not completely fill the primary receptacle at 130° F.
- A DOT 2P container must be used if the internal pressure is from 140 psig to 160 psig at 130° F (55° C). A DOT 2Q container must be used if the pressure is from 161 psig to 180 psig at 130° F (55° C).
- A container with an internal pressure more than 180 psig at 130° F (55° C) is prohibited from mailing.
- Primary receptacles must have recessed valves, screw-thread caps, tap closures, or other means to prevent accidental discharge. Valves and fittings must be protected to ensure the integrity of the receptacle during transport.

#### Cushioning Material

- Sufficient cushioning material must surround the primary receptacle to absorb shock and prevent damage.

#### Outer Packaging

- Strong outer packaging that is capable of firmly and securely holding the primary receptacle and cushioning material is required.
- Multiple primary receptacles may be securely packed within a single strong outer packaging, provided the total volume of flammable gas does not exceed 33.8 fluid ounces (1 liter) per mailpiece.

#### Marking

- The address side of the outer packaging must be clearly marked with "Surface Only" or "Surface Mail Only" and "Consumer Commodity ORM-D."
- Optionally, the address side of the outer packaging may bear an approved DOT limited quantity square-on-point marking designating surface transportation, prepared under 342.4b, instead of an ORM-D marking.
- A complete return address and delivery address must be used.

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## USPS Packaging Instruction 2B

### Nonflammable Gases

A Class 2 nonflammable gas that qualifies as a consumer commodity or ORM-D material is mailable provided that all applicable requirements in 342 are met and it is properly packaged as follows.

#### Proper Shipping Name

- Consumer Commodity.

#### ID Number

- Various (see Appendix A).

#### Mailability

- International Mail: Prohibited.
- Domestic Mail: Permitted with restrictions via air transportation and permitted via surface transportation.

#### Required Packaging

##### Primary Receptacle(s)

- The capacity of an other-than-metal (nonmetal) primary receptacle must be 4 fluid ounces (7.22 cubic inches) or less per mailpiece.
- The capacity of a metal primary receptacle must be 33.8 fluid ounces (1-liter or 61.0 cubic inches) or less.
- The liquid content of the material and the gas must not completely fill the primary receptacle at 130° F.
- A DOT 2P container must be used if the internal pressure is from 140 psig to 180 psig at 130° F (55° C). A DOT 2Q container must be used if the pressure is from 161 psig to 180 psig at 130° F (55° C).
- A container with an internal pressure more than 180 psig at 130° F (55° C) is prohibited from mailing.
- The primary receptacle(s) must be packaged to protect valves and fittings and to ensure integrity during transport.
- The primary receptacle(s) must have a recessed valve, screw-thread cap, tap closure, or other means to prevent accidental discharge.

##### Cushioning Material

- Sufficient cushioning material must surround the primary receptacle to absorb shock and prevent damage.

##### Outer Packaging

- Strong outer packaging that is capable of firmly and securely holding the primary receptacle(s) and cushioning material is required.
- Multiple primary receptacles may be securely packed within a single strong outer packaging.
- Each mailpiece must not exceed a total weight of 25 pounds.

##### Marking

- For air transportation, mailpieces must bear the DOT square-on-point marking including the symbol "Y," an approved DOT Class 9 hazardous material warning label, Identification Number "ID8000," and the proper shipping name "Consumer Commodity."
- For surface transportation, each mailpiece must be clearly marked on the address side with "Surface Only" or "Surface Mail Only" and "Consumer Commodity ORM-D."
- Optionally, the address side of the outer packaging may bear an approved DOT limited quantity square-on-point marking designating surface transportation, prepared under 342.4c, instead of an ORM-D marking.
- A complete return address and delivery address must be used.

##### Documentation

- For air transportation, a mailable, nonflammable gas must have a properly completed shipper's declaration for dangerous goods prepared in triplicate and affixed to the outside of the mailpiece.

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## 344 Flammable Solids (Hazard Class 4)

### 344.1 Definition

Hazard Class 4 consists of three divisions:

- a. *Division 4.1, Flammable Solids.* Any solid material other than one classed as an explosive that, under conditions normally incident to transportation, is likely to cause fires through friction or retained heat from manufacturing or processing, or that can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation hazard.
- b. *Division 4.2, Spontaneously Combustible.* A liquid or solid pyrophoric material that even in small amounts and without an external ignition source can ignite within 5 minutes after coming in contact with air, or a self-heating material that when in contact with air and without an energy supply is liable to self heat.
- c. *Division 4.3, Dangerous When Wet.* A material that, by contact with water, is likely to become spontaneously flammable or to give off flammable or toxic gas at a rate greater than 1 liter per kilogram of the material per hour.

Examples of flammable solids include certain metallic hydrides, metallic sodium and potassium, oily fabrics, processed metals, matches, and nitrocellulose products.

### 344.2 Mailability

The following conditions apply:

- a. *International Mail.* All flammable solids are prohibited.
- b. *Domestic Mail via Air Transportation.* All flammable solids are prohibited.
- c. *Domestic Mail via Surface Transportation.* A flammable solid that can qualify as an ORM-D material is permitted.

#### 344.21 Nonmailable Flammable Solids

When flammable solids that are nonmailable under 344 are found in the mailstream, the procedures in POM 139.117 must be followed if the materials present an immediate threat to persons or property.

Strike-anywhere matches are nonmailable in international mail and domestic mail. Safety matches (book, card, or strike-on-box) are nonmailable in international and domestic mail via air transportation.

#### 344.22 Mailable Flammable Solids

The following are mailable:

- a. Flammable solids that are eligible to be reclassified as mailable limited quantity or ORM-D materials are permitted in the domestic mail via surface transportation.
- b. Safety matches (book, card, or strike-on-box) are permitted only in domestic mail via surface transportation.

### 344.3 Packaging, Marking, and Documentation

The following conditions apply:

- a. *Mailable Flammable Solids.* The conditions in Packaging Instruction 4A in Appendix C must be followed. Mailpieces containing mailable Class 4 materials must be plainly and durably marked on the address side with "ORM-D" immediately following or below the proper shipping name (i.e., Consumer Commodity). Optionally, mailpieces may be marked with an approved DOT limited quantity square-on-point marking (see Exhibit 325.2a). The top and bottom portions of the square-on-point and the border forming the square-on-point must be black, and the center must be white or of a suitable contrasting background. Surface shipments containing qualifying ORM-D material bearing the square-on-point limited quantity marking are not required to be marked with the shipping name and identification number. A shipper's declaration for dangerous goods is not required for mailable Class 4 materials sent via surface transportation. When DOT square-on-point markings are used, markings must be durable, legible, and readily visible, and must be applied on at least one side or one end of the outer packaging. The border forming the square-on-point must be at least 2 mm in width, and the minimum dimension of each side must be 100 mm, unless the package size requires a reduced size marking of no less than 50 mm on each side.
- b. *Safety Matches.* The conditions in Packaging Instruction 4B in Appendix C must be followed. Mailpieces must be plainly and durably marked on the address side with "Surface Only" or "Surface Mail Only" and, as applicable, "Book Matches," "Strike-on-Card Matches," or "Card Matches." A shipper's declaration for dangerous goods is not required.

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## USPS Packaging Instruction 4B

### Safety Matches

Safety matches (book, card, or strike-on-box) may be mailed only in domestic mail via surface transportation, provided all applicable requirements in 344 are met, including:

- They do not ignite spontaneously under conditions normally incident to transportation or when subjected for eight consecutive hours to a temperature of 200° F (93° C).
- They cannot be readily ignited by friction unless struck on their own or on a similar box, card, or book.

**Note:** Strike-anywhere matches assigned UN1331 and other types of matches assigned UN2254 or UN1945 are nonmailable.

### Proper Shipping Name

- Matches, Safety.

### ID Number

- UN1944.

### Mailability

- International Mail: Prohibited.
- Domestic Mail: Permitted only via surface transportation.

### Required Packaging

#### Primary Receptacle

- Mailable types of safety matches must be tightly packed in a securely sealed primary receptacle to prevent any shifting or movement that could cause accidental ignition by rubbing against adjoining items.
- Multiple primary receptacles are permitted per mailpiece.

#### Outer Packaging

- The outer packaging material must be made of fiberboard, wood, or other equivalent and be strong enough to prevent the inner contents from bursting through.
- The primary container(s) must be snugly packed within the outer packaging.
- Each mailpiece must not exceed a total weight of 25 pounds.

#### Marking

- The address side of each mailpiece must be clearly marked "Surface Only" or "Surface Mail Only" and either "Book Matches," "Card matches," or "Strike-on-Box Matches," as applicable.
- A complete return address and delivery address must be used.

#### Documentation

- A shipping paper is not required.

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