DOT CHART 13
Hazardous Materials Marking, Labeling and Placarding Guide

Refer to 49 CFR, Part 172:

- Marking - Subpart D
- Labeling - Subpart E
- Placarding - Subpart F
- Emergency Response - Subpart G

NOTE: This document is for general guidance only and must not be used to determine compliance with 49 CFR, Parts 100-185.
Hazardous Materials Warning Labels

Actual label size: at least 100 mm (3.9 inches) on all sides

§173.25(a)(4)

ORM-D

ORM-D-AIR

CLASS 3 Flammable Liquid

CLASS 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet: Divisions 4.1, 4.2, 4.3

Fumigant Marking (Red or Black)

Cargo Aircraft

Only

§172.312(a)

§172.332(a)

CLASS 9 Miscellaneous

Hazardous Material

For Regulated Medical Waste (RMW), an Infectious Substance label is not required on an outer packaging if the OSHA Biohazard marking is used as prescribed in 29 CFR 1910.1200(g), CDC Etiologic Agent label must be used as prescribed in 42 CFR 72.3 and 72.6. A bulk package of RMW must display a BIOHAZARD marking.

§172.323, §172.405(c), §172.429, §172.430, §172.432

For Biological Substances, Category B, Subsidiary Risk Label

Carg0 Aircraft Only

unless otherwise specified

Keep a copy of the Emergency Response Guidebook handy!
Hazardous Materials Warning Placards

Class 1 Explosives

Class 2 Gases

Class 3 Flammable Liquid and Combustible Liquid

Class 4 Flammable Solid, Spontaneously Combustible, and Dangerous When Wet

Class 5 Oxidizer & Organic Peroxide

Class 6 Poison (Toxic) and Poison Inhalation Hazard

Class 7 Radioactive

Class 8 Corrosive

Class 9 Miscellaneous

Identification Number Displays

Placards or Orange Panels

Identification number must be used.

1090

1090

1090

1717

1933

MUST BE DISPLAYED ON: (1) Tank Cars, Cargo Tanks, Portable Tanks, and other Bulk Packaging; (2) Vehicles or containers containing 4,000 kg (8,820 lbs) or more of non-bulk packages of only a single hazardous material having the same proper shipping name and identification number; and (3) 1,000 kg (2,205 lbs) of materials poisonous by inhalation in Hazard Zone A or B. See §172.301(a)(3) and §172.313(c).
General Guidelines on Use of Warning Labels and Placards

**LABELS**

See 49 CFR, Part 172, Subpart E, for complete labeling regulations.

- The Hazardous Materials Table (§172.101, Col. 6) identifies the proper label(s) for the hazardous material listed.
- Any person who offers a hazardous material for transportation MUST label the package, if required (§172.400(a)).
- Labels may be affixed to packages when not required by regulations, provided each label represents a hazard of the material contained in the package (§172.401).
- The appropriate hazard class or division number must be displayed in the lower corner of a primary and subsidiary hazard label (§172.402(b)).
- For classes 1, 2, 3, 4, 5, 6, and 8, text indicating a hazard (e.g., “CORROSIVE”) is NOT required on a primary or subsidiary label. The label must otherwise conform to Subpart E of Part 172 (§172.405).
- Labels must be printed on or affixed to the surface of the package near the proper shipping name marking (§172.406(a)).
- When primary and subsidiary labels are required, they must be displayed next to each other (§172.406(c)).
- For a package containing a Division 6.1, PG III material, the POISON label specified in §172.430 may be modified to display the text PG III instead of POISON or TOXIC. Also see §172.313(d).

The new ORGANIC PEROXIDE label becomes mandatory on 1 January 2011 and reflects the fact that organic peroxides are highly flammable and eliminates the requirements for a flammable liquid subsidiary label (§172.427). For information, see §171.14.

**PLACARDS**

See 49 CFR, Part 172, Subpart F, for complete placarding regulations.

- Each person who offers for transportation or transports any hazardous material subject to the Hazardous Materials Regulations must comply with all applicable requirements of Subpart F (§172.500).
- Placards may be displayed for a hazardous material, even when not required, if the placarding otherwise conforms to the requirements of Subpart F of Part 172 (§172.502(c)).
- For other than Class 7 or the DANGEROUS placard, text indicating a hazard (e.g., “FLAMMABLE”) is not required. Text may be omitted from the OXYGEN placard if the specific ID number is displayed on the placard (§172.519(b)(3)).
- For a placard corresponding to the primary or subsidiary hazard class of a material, the hazard class or division number must be displayed in the lower corner of the placard.
- Any bulk packaging, freight container, unit load device, transport vehicle or rail car containing any quantity of material listed in Table 1 must be placarded (§172.504).
- When the gross weight of all hazardous materials in non-bulk packages covered in Table 2 is less than 454 kg (1,001 lbs), no placard is required on a transport vehicle or freight container (§172.504(e)).
- Notes: See §172.504(f)(10) for placarding Division 6.1, PG III materials.
- Placarded loads require registration with USDOT. See §107.601 for registration regulations.
- The new ORGANIC PEROXIDE placard becomes mandatory 1 January 2011 for transportation by rail, vessel, or aircraft 1 January 2014 for transportation by highway. The placard will enable transport workers to readily distinguish peroxides from oxidizers (§172.552). For information, see §171.14.

### Placarding Tables

#### §172.504(e)

<table>
<thead>
<tr>
<th>Category of material (Hazard Class or division number and additional description, as appropriate)</th>
<th>Placard name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>EXPLOSIVES 1.1</td>
</tr>
<tr>
<td>1.2</td>
<td>EXPLOSIVES 1.2</td>
</tr>
<tr>
<td>1.3</td>
<td>EXPLOSIVES 1.3</td>
</tr>
<tr>
<td>2.3</td>
<td>POISON GAS</td>
</tr>
<tr>
<td>4.3</td>
<td>DANGEROUS WHEN WET</td>
</tr>
<tr>
<td>5.2 (Organic peroxide, Type 8, liquid or solid, temperature controlled)</td>
<td>ORGANIC PEROXIDE</td>
</tr>
<tr>
<td>6.1 (materials poisonous by inhalation, see §171.8 of this subchapter)</td>
<td>POISON INHALATION HAZARD</td>
</tr>
<tr>
<td>7 (Radioactive, “yellow III” label only)</td>
<td>RADIOACTIVE</td>
</tr>
</tbody>
</table>

**Note:** RADIOACTIVE placard also required for exclusive use shipments of low specific activity material and surface contaminated objects transported in accordance with §173.427(a)(8).

#### §172.504(f)

**TABLE 2**

<table>
<thead>
<tr>
<th>Category of material (Hazard Class or division number and additional description, as appropriate)</th>
<th>Placard name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4</td>
<td>EXPLOSIVES 1.4</td>
</tr>
<tr>
<td>1.5</td>
<td>EXPLOSIVES 1.5</td>
</tr>
<tr>
<td>1.6</td>
<td>EXPLOSIVES 1.6</td>
</tr>
<tr>
<td>2.1</td>
<td>FLAMMABLE GAS</td>
</tr>
<tr>
<td>2.2</td>
<td>NON-FLAMMABLE GAS</td>
</tr>
<tr>
<td>3</td>
<td>FLAMMABLE COMBUSTIBLE</td>
</tr>
<tr>
<td>4.1</td>
<td>FLAMMABLE SOLID</td>
</tr>
<tr>
<td>4.2</td>
<td>SPONTANEOUSLY COMBUSTIBLE</td>
</tr>
<tr>
<td>5.1</td>
<td>OXIDIZER</td>
</tr>
<tr>
<td>5.2 (Other than organic peroxide, Type 8, liquid or solid, temperature controlled)</td>
<td>ORGANIC PEROXIDE</td>
</tr>
<tr>
<td>6.1 (Other than materials poisonous by inhalation)</td>
<td>POISON</td>
</tr>
<tr>
<td>6.2</td>
<td>(None)</td>
</tr>
<tr>
<td>8</td>
<td>CORROSIVE</td>
</tr>
<tr>
<td>9</td>
<td>Class 9 (see §172.504(f)(9))</td>
</tr>
<tr>
<td>ORM-D</td>
<td></td>
</tr>
</tbody>
</table>

**Inhalation Hazard Materials**

Materials which meet the inhalation toxicity criteria have additional “communication standards” prescribed by the HMR. The words “Poison-Inhalation hazard” or “Toxic-Inhalation hazard” and the words “Zone A”, “Zone B”, “Zone C”, or “Zone D” for gases or “Zone A” or “Zone B” for liquids, as appropriate, shall be entered on the shipping paper as required by §172.203(m). Packagings must be marked “Inhalation Hazard” or, alternatively, when the words “Inhalation Hazard” appear on the label or placard, the “Inhalation Hazard” marking is not required on the package. Transport vehicles, freight containers, portable tanks and unit load devices that contain a poisonous material subject to the “Poison-Inhalation Hazard” shipping description, must be placarded with a POISON INHALATION HAZARD or POISON GAS placard, as appropriate. This shall be in addition to any other placard required for that material (§172.504).

For complete details, refer to one or more of the following:

- Code of Federal Regulations, Title 49, Transportation, Parts 100-185. [All modes]
- International Civil Aviation Organization (ICAO) Technical Instructions for the Safe Transport of Dangerous Goods by Air. [Air]
- International Maritime Dangerous Goods (IMDG) Code. [Water]
- Transportation of Dangerous Goods Regulations of Transport Canada. [Rail and Highway]

Copies of this Chart may be obtained by contacting:

**U.S. Department of Transportation**

**Pipeline and Hazardous Materials Safety Administration**

**US DOT/PHMSA/CHMT/PHI-50**

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