Hazardous Materials Bulletin

PLACARDING

Revised December 2005

This Bulletin provides a general overview of the placarding requirements for highway transportation; consult the Federal Hazardous Materials Regulations (FHMR) before placarding a vehicle (See Title 49, CFR, Part 172, Subpart F, 172.500).

The following Table 1 hazardous materials must be placarded regardless of quantity:

Explosives 1.1, 1.2, 1.3
Poison Gas 2.3
Dangerous when wet 4.3
Radioactive 7, Yellow III label only and certain LSA's.
Poison/Toxic 6.1, Inhalation Hazard, Zone A and B
Organic Peroxide, 5.2, Type B, liquid or solid, temperature controlled

All other classes and divisions of hazardous materials are considered Table 2 hazardous materials (See 172.504). While Table 2 does have a "1,000 lb. exception" (see below), there are two circumstances where a Table 2 material must be placarded for any quantity:

- A Table 2 material in a package meeting the definition of a "bulk package." A bulk package is defined as a single container with a water capacity greater than 450 liters (119 gallons) for liquids; a net mass greater than 400 kilograms (882 lbs.) and a capacity greater than 450 liters (119 gallons) for solids; or a water capacity greater than 454 kilograms (1,000 lbs.) as a receptacle for a gas.

- A Table 2 material with a mandatory subsidiary hazard placard requirement (See Section 172.505). Subsidiary hazards which are identified by Column 6 of the 172.101 Table, that require a placard are poison inhalation hazards (PIH); dangerous when wet (4.3); and radioactive materials with a corrosive subsidiary. All other subsidiary hazards *may* be placarded, but are not required to be placarded.

If the Table 2 is transported in non-bulk packages and does not require a subsidiary placard, placarding is only required if the aggregate gross weight exceeds 1,000 lbs. Aggregate gross weight includes the weight of the package and the material.

The "Dangerous" placard is an option, not a requirement. The "Dangerous" placard may be used only when two or more Table 2 materials in non-bulk packages are transported in the same vehicle. The "Dangerous" placard cannot be used for a shipment of one class of 1,000 kg. (2,205 lbs.) or more from a single loading facility.

There are a number of placarding exceptions under §172.504(f), which allow a "higher" hazard placard to provide for "lower" hazard materials that are transported on the vehicle. For example, a Nonflammable Gas placard is not required if the vehicle is displaying a Flammable Gas placard, as required.

The Class 9 (miscellaneous hazard) placard, which includes most hazardous wastes and substances, is an optional placard for domestic shipments (within the United States). For international shipments, the Class 9 placard is required under the Table 2 provisions. However, even if destined to be imported from or exported to the USA, the placard does not need to be displayed while in the USA according to an interpretation of §172.504 (f)(9) by USDOT/RSPA.

Placards are not required for materials classed as combustible liquids transported in non-bulk packages within the United States. §173.159 also provides placarding exceptions for batteries, under certain conditions.

Limited quantities, ORM-D materials, infectious substances, small quantities, and materials in §173.13 do not require placarding. Empty non-bulk packages containing only the residue of a hazardous material do not have to be placarded (see §173.29). Containers cleaned and purged or refilled with a non-hazardous material do not require placarding.

Placards must be displayed on bulk packages and on vehicles. When displayed, the placard must read horizontal, left to right, and must be free and clear of dirt and appurtenances such as ladders and piping. Placards must be placed away from wording, such as advertisements, to prevent confusion.

Generally speaking, placards must be displayed on all four sides of a package or vehicle (see below). The vehicle is not required to be placarded on any side that the placards on the package are visible. Placard holders are permitted, but not required. Placing tape or similar adhesives on the edge of a placard to affix it to a surface is acceptable, provided it does not obscure the placard. Placards displayed on mudflaps, low bumpers, and underneath flatbed frames are not acceptable.

Placards may be displayed on the front of the tractor or on the front of a semi-trailer, for combination vehicles. For single vehicles, the placard must be visible when standing at the front of the vehicle.

The following containers may be placarded on two sides or labeled in lieu of placarding:

1) A portable tank having a capacity of less than 3,785 L (1,000 gallons);
2) A DOT 106 or 110 multi-unit tank car tank;
3) A bulk packaging other than a portable tank, cargo tank, or tank car (e.g., a bulk bag or box) with a volumetric capacity of less than 18 m3 (640 cubic feet); and
4) An intermediate bulk container. A vehicle transporting these packages must still be placarded on all four sides.

Placards must meet design, size, and color specifications. Faded placards are a common violation. A good practical method of checking placards for fading is to compare the displayed placard to a new placard. If you can see a difference in colors, it should be replaced.

A shipper is required to offer the appropriate placards to a motor carrier prior to or at the time the material is offered for transportation, unless the vehicle is already placarded as required. A shipper must, however, affix the appropriate placards on the package when offering a bulk package (See definition above; see also §172.514). A motor carrier may not transport a hazardous material that requires placarding without the appropriate placards displayed properly on the vehicle.

49 CFR 172.519(a)(4) discusses primary and subsidiary placards. A change in the rule requires both primary and subsidiary placards to display the hazard class in the bottom corner. An exception is allowed for permanent placards in use before 0ctober 30, 2001 and also stocks of non-permanently affixed placards in compliance with regulations in effect on September 30, 2001. Both can be used until October 1, 2005, provided they are maintained.

Remember: The whole idea of placarding is to *communicate the hazard* to industry personnel, the general public, and first responders. The best method is to comply with all of the regulations unless you can locate an exception that applies to your particular situation.

The PIH placard is required for all poison 2.3 gases and 6.1 liquids or solids that meet the PIH, PG I, Zone A or B specifications. Further, “Drive Safely” and other safety slogans that appear in a placard form are illegal.

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