

§ 178.700

(4) Following the appropriate drop sequence, there must be no leakage from the primary receptacle(s) which should remain protected by absorbent material in the secondary packaging.

(e) The sample must be fully immersed in water for a period of at least 5 minutes and then allowed to drain for not more than 30 minutes at 23 °C (73 °F) and 50 ± 2 percent relative humidity. It should then be subjected to the test described in paragraph (d) of this section.

(f) The sample must be conditioned in an atmosphere of -18 °C (0 °F) or less for a period of at least 24 hours and within 15 minutes of removal from that atmosphere be subjected to the test described in paragraph (d) of this section. Where the sample contains dry ice, the conditioning period may be reduced to 4 hours.

(g) Where packaging is intended to contain dry ice, a test additional to that specified in paragraph (d) or (e) or (f) of this section must be carried out. One sample must be stored so that all the dry ice dissipates and then be subjected to the test described in paragraph (d) of this section.

(h) Packagings with a gross mass of 7 kg (15 pounds) or less should be subjected to the tests described in paragraph (h)(1) of this section and packagings with a gross mass exceeding 7 kg (15 pounds) to the tests in paragraph (h)(2) of this section.

(1) Samples must be placed on a level hard surface. A cylindrical steel rod with a mass of at least 7 kg (15 pounds), a diameter not exceeding 38 mm (1.5 inches) and the impact end edges a radius not exceeding 6 mm (0.2 inches), must be dropped in a vertical free fall from a height of 1 m (3 feet), measured from the impact end of the impact surface of the sample. One sample must be placed on its base. A second sample must be placed in an orientation perpendicular to that used for the first. In each instance the steel rod must be aimed to impact the primary receptacle. Following each impact, penetration of the secondary packaging is acceptable, provided that there is no leakage from the primary receptacle(s).

(2) Samples must be dropped on to the end of a cylindrical steel rod. The

49 CFR Ch. I (10-1-01 Edition)

rod must be set vertically in a level hard surface. It must have a diameter of 38 mm (1.5 inches) and the edges of the upper end a radius not exceeding 6 mm (0.2 inches). The rod must protrude from the surface a distance at least equal to that between the primary receptacle(s) and the outer surface of the outer packaging with a minimum of 200 mm (7.9 inches). One sample must be dropped in a vertical free fall from a height of 1 m (3 feet), measured from the top of the steel rod. A second sample must be dropped from the same height in an orientation perpendicular to that used for the first. In each instance the packaging should be so orientated that the steel rod must be aimed to impact the primary receptacle(s). Following each impact, penetration of the secondary packaging is acceptable, provided that there is no leakage from the primary receptacle(s).

(i) Packagings subject to this section are not subject to §178.503 or any other requirements of this subpart, except §178.608.

[Amdt. 178-97, 55 FR 52723, Dec. 21, 1990, as amended by Amdt. 178-111, 60 FR 48787, Sept. 20, 1995]

Subpart N—IBC Performance-Oriented Standards

SOURCE: Amdt. 178-103, 59 FR 38068, July 26, 1994, unless otherwise noted; 66 FR 45386, Aug. 28, 2001.

§ 178.700 Purpose, scope and definitions.

(a) This subpart prescribes requirements applying to IBCs intended for the transportation of hazardous materials. Standards for these packagings are based on the UN Recommendations.

(b) Terms used in this subpart are defined in §171.8 of this subchapter and in paragraph (c) of this section.

(c) The following definitions pertain to the IBC standards in this subpart.

(1) *Body* means the receptacle proper (including openings and their closures, but not including service equipment), that has a volumetric capacity of not more than three cubic meters (3,000 L, 793 gallons, or 106 cubic feet) and not less than 0.45 cubic meters (450 L, 119

gallons, or 15.9 cubic feet) or a maximum net mass of not less than 400 kg (882) pounds.

(2) *Service equipment* means filling and discharge, pressure relief, safety, heating and heat-insulating devices and measuring instruments.

(3) *Structural equipment* means the reinforcing, fastening, handling, protective or stabilizing members of the body or stacking load bearing structural members (such as metal cages).

(4) *Maximum permissible gross mass* means the mass of the body, its service equipment, structural equipment and the maximum net mass (see §171.8 of this subchapter).

[Amdt. 178-103, 59 FR 38068, July 26, 1994, as amended by Amdt. 178-108, 60 FR 40038, Aug. 4, 1995; 66 FR 45386, 45387, Aug. 28, 2001]

§ 178.702 IBC codes.

(a) Intermediate bulk container code designations consist of: two numerals specified in paragraph (a)(1) of this section; followed by the capital letter(s) specified in paragraph (a)(2) of this section; followed, when specified in an individual section, by a numeral indicating the category of intermediate bulk container.

(1) IBC code number designations are as follows:

Type	For solids, discharged		For liquids
	by gravity	Under pressure of more than 10 kPa (1.45 psig)	
Rigid	11	21	31
Flexible	13		

(2) Intermediate bulk container code letter designations are as follows:

- “A” means steel (all types and surface treatments).
- “B” means aluminum.
- “C” means natural wood.
- “D” means plywood.
- “F” means reconstituted wood.
- “G” means fiberboard.
- “H” means plastic.
- “L” means textile.
- “M” means paper, multiwall.
- “N” means metal (other than steel or aluminum).

(b) For composite IBCs, two capital letters are used in sequence following the numeral indicating IBC design type. The first letter indicates the ma-

terial of the IBC inner receptacle. The second letter indicates the material of the outer IBC. For example, 31HA1 is a composite IBC with a plastic inner receptacle and a steel outer packaging.

[Amdt. 178-103, 59 FR 38068, July 26, 1994, as amended at 66 FR 45386, Aug. 28, 2001]

§ 178.703 Marking of IBCs.

(a) The manufacturer shall:

(1) Mark every IBC in a durable and clearly visible manner. The marking may be applied in a single line or in multiple lines provided the correct sequence is followed with the information required by this section in letters, numerals and symbols of at least 12 mm in height. This minimum marking size applies only to IBCs manufactured after October 1, 2001). The following information is required in the sequence presented:

(i) The United Nations symbol as illustrated in §178.503(e)(1). For metal IBCs on which the marking is stamped or embossed, the capital letters ‘UN’ may be applied instead of the symbol.

(ii) The code number designating IBC design type according to §178.702(a). The letter ‘W’ must follow the IBC design type identification code on an IBC when the IBC differs from the requirements in subpart N of this part, or is tested using methods other than those specified in this subpart, and is approved by the Associate Administrator in accordance with the provisions in §178.801(i).

(iii) A capital letter identifying the performance standard under which the design type has been successfully tested, as follows:

- (A) X—for IBCs meeting Packing Group I, II and III tests;
- (B) Y—for IBCs meeting Packing Group II and III tests; and
- (C) Z—for IBCs meeting only Packing Group III tests.

(iv) The month (designated numerically) and year (last two digits) of manufacture.

(v) The country authorizing the allocation of the mark. The letters ‘USA’ indicate that the IBC is manufactured and marked in the United States in compliance with the provisions of this subchapter.

(vi) The name and address or symbol of the manufacturer or the approval