§ 178.816 Topple test.

(a) General. The topple test must be conducted for the qualification of all flexible IBC design types.

(b) Special preparation for the topple test. The flexible IBC must be filled to not less than 95 percent of its capacity and to its maximum net mass, with the load being evenly distributed.

(c) Test method. A flexible IBC must be toppled onto any part of its top upon a rigid, non-resilient, smooth, flat, and horizontal surface.

(d) Topple height. For all flexible IBCs, the topple height is specified as follows:

1. Packing Group I: 1.8 m (5.9 feet).
2. Packing Group II: 1.2 m (3.9 feet).
3. Packing Group III: 0.8 m (2.6 feet).

(e) Criteria for passing the test. For all flexible IBCs, there may be no loss of contents. A slight discharge (e.g., from closures or stitch holes) upon impact is not considered to be a failure, provided no further leakage occurs.

§ 178.818 Tear test.

(a) General. The tear test must be conducted for the qualification of all flexible IBC design types.

(b) Special preparation for the tear test. The flexible IBC must be filled to not less than 95 percent of its capacity and to its maximum net mass, the load being evenly distributed.

(c) Test method. The flexible IBC, lying on its side, must be lifted at a speed of at least 0.1 m/second (0.33 ft/s) to an upright position, clear of the floor, by one lifting device, or by two lifting devices when four are provided.

(d) Criterion for passing the test. For all flexible IBCs, there may be no damage to the IBC or its lifting devices which renders the IBC unsafe for transportation or handling.

§ 178.819 Vibration test.

(a) General. The vibration test must be conducted for the qualification of all rigid IBC design types. Flexible IBC design types must be capable of withstanding the vibration test.

(b) Special preparation for the vibration test. The flexible IBC must be filled to not less than 95 percent of its capacity and to its maximum net mass, with the load being evenly distributed.

(c) Test method. (1) A sample IBC, selected at random, must be filled and closed as for shipment. IBCs intended for liquids may be tested using water
as the filling material for the vibration test.

(2) The sample IBC must be placed on a vibrating platform with a vertical or rotary double-amplitude (peak-to-peak displacement) of one inch. The IBC must be constrained horizontally to prevent it from falling off the platform, but must be left free to move vertically and bounce.

(3) The test must be performed for one hour at a frequency that causes the package to be raised from the vibrating platform to such a degree that a piece of material of approximately 1.6-mm (0.063-inch) thickness (such as steel strapping or paperboard) can be passed between the bottom of the IBC and the platform. Other methods at least equally effective may be used (see §178.801(i)).

(c) Criteria for passing the test. An IBC passes the vibration test if there is no rupture or leakage.

Subpart P—Large Packagings Standards

Source: 75 FR 5397, Feb. 2, 2010, unless otherwise noted.

§ 178.900 Purpose and scope.

(a) This subpart prescribes requirements for Large Packaging 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.

§ 178.905 Large Packaging identification codes.

Large packaging code designations consist of: two numerals specified in paragraph (a) of this section; followed by the capital letter(s) specified in paragraph (b) of this section.

(a) Large packaging code number designations are as follows: 50 for rigid Large Packagings; or 51 for flexible Large Packagings.

(b) Large Packagings code letter designations are as follows:

(1) “A” means steel (all types and surface treatments).

(2) “B” means aluminum.

(3) “C” means natural wood.

(4) “D” means plywood.

(5) “F” means reconstituted wood.

(6) “G” means fiberboard.

(7) “H” means plastic.

(8) “M” means paper, multiwall.

(9) “N” means metal (other than steel or aluminum).

§ 178.910 Marking of Large Packagings.

(a) The manufacturer must:

(1) Mark every Large Packaging 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 marking size requirement applies only to large packages manufactured after January 1, 2014. The following information is required in the sequence presented:

(i) Except as provided in §178.503(e)(1)(ii), the United Nations packaging symbol as illustrated in §178.503(e)(1)(i). For metal Large Packagings on which the marking is stamped or embossed, the capital letters “UN” may be applied instead of the symbol;

(ii) The code number designating the Large Packaging design type according to §178.905. The letter “W” must follow the Large Packaging design type identification code on a Large Packaging when the Large Packaging differs from the requirements in subpart P 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 §178.955;

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

(A) X—for Large Packagings meeting Packing Groups I, II and III tests;

(B) Y—for Large Packagings meeting Packing Groups II and III tests; and

(C) Z—for Large Packagings meeting Packing Group III test.