

§ 173.466

such mass and rigidity that any increase in its resistance to displacement or deformation upon impact by the specimen would not significantly increase the damage to the specimen.

(d) *Stacking test.* (1) The specimen must be subjected for a period of at least 24 hours to a compressive load equivalent to the greater of the following:

(i) A total weight equal to five times the maximum weight of the package; or

(ii) The equivalent of 13 kilopascals (1.9 psi) multiplied by the vertically projected area of the package.

(2) The compressive load must be applied uniformly to two opposite sides of the specimen, one of which must be the base on which the package would normally rest.

(e) *Penetration test.* For the penetration test, the specimen must be placed on a rigid, flat, horizontal surface that will not move significantly while the test is being performed.

(1) A bar of 3.2 cm (1.25 inches) in diameter with a hemispherical end and a mass of 6 kg (13.2 pounds) must be dropped and directed to fall with its longitudinal axis vertical, onto the center of the weakest part of the specimen, so that, if it penetrates far enough, it will hit the containment system. The bar may not be significantly deformed by the test; and

(2) The height of the drop of the bar measured from its lower end to the intended point of impact on the upper surface of the specimen must be 1 m (3.3 feet) or greater.

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended by Amdt. 173-244, 61 FR 20753, May 8, 1996; 66 FR 45380, Aug. 28, 2001; 69 FR 3692, Jan. 26, 2004; 70 FR 56099, Sept. 23, 2005; 79 FR 40617, July 11, 2014]

§ 173.466 Additional tests for Type A packagings designed for liquids and gases.

(a) In addition to the tests prescribed in § 173.465, Type A packagings designed for liquids and gases must be capable of withstanding the following tests in this section. The tests are successful if the requirements of § 173.412(k) are met.

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(b) [Reserved]

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended at 66 FR 45380, Aug. 28, 2001; 79 FR 40617, July 11, 2014]

§ 173.467 Tests for demonstrating the ability of Type B and fissile materials packagings to withstand accident conditions in transportation.

Each Type B packaging or packaging for fissile material must meet the test requirements prescribed in 10 CFR part 71 for ability to withstand accident conditions in transportation.

§ 173.468 Test for LSA-III material.

(a) LSA-III Class 7 (radioactive) material must meet the test requirement of paragraph (b) of this section. Any differences between the material to be transported and the test material must be taken into account in determining whether the test requirements have been met.

(b) *Test method.* (1) The specimen representing no less than the entire contents of the package must be immersed for 7 days in water at ambient temperature.

(2) The volume of water to be used in the test must be sufficient to ensure that at the end of the test period the free volume of the unabsorbed and unreacted water remaining will be at least 10% of the volume of the specimen itself.

(3) The water must have an initial pH of 6-8 and a maximum conductivity of 10 micromho/cm at 20 °C (68 °F).

(4) The total activity of the free volume of water must be measured following the 7 day immersion test and must not exceed 0.1 A₂.

§ 173.469 Tests for special form Class 7 (radioactive) materials.

(a) Special form Class 7 (radioactive) materials must meet the test requirements of paragraph (b) of this section. Each solid Class 7 (radioactive) material or capsule specimen to be tested must be manufactured or fabricated so that it is representative of the actual solid material or capsule that will be transported with the proposed radioactive content duplicated as closely as practicable. Any differences between the material to be transported and the test material, such as the use of non-