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§ 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:

(1) *Free drop test.* The packaging specimen must drop onto the target so as to suffer the maximum damage to its containment. The height of the drop measured from the lowest part of the packaging specimen to the upper surface of the target must be 9 m (30 feet) or greater. The target must be as specified in § 173.465(c)(5).

(2) *Penetration test.* The specimen must be subjected to the test specified in § 173.465(e) except that the height of the drop must be 1.7 m (5.5 feet).

(b) [Reserved]

[Amdt. 173–244, 60 FR 50307, Sept. 28, 1995, as amended at 66 FR 45380, Aug. 28, 2001]

§ 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 A_2.

§ 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 nonradioactive contents, must be taken into account in determining whether the test requirements have been met. The following additional conditions apply:

(1) A different specimen may be used for each of the tests;

(2) The specimen may not break or shatter when subjected to the impact, percussion, or bending tests;

(3) The specimen may not melt or disperse when subjected to the heat test; and

(4) After each test, leaktightness or indispersibility of the specimen must be determined by—

(i) A method no less sensitive than the leaching assessment prescribed in paragraph (c) of this section. For a capsule resistant to corrosion by water, and which has an internal void volume greater than 0.1 milliliter, an alternative to the leaching assessment is a demonstration of leaktightness of 10^{-4} torr-l/s (1.3×10^{-4} atm-cm^3/s) based on air at 25 °C (77 °F) and one atmosphere differential pressure for solid radioactive content, or 10^{-6} torr-l/s (1.3×10^{-6} atm-cm^3/s) for liquid or gaseous radioactive content; or

(ii) A specimen that comprises or simulates Class 7 (radioactive) material contained in a sealed capsule need not be subjected to the leaching assessment specified in paragraph (c) of this section provided it is alternatively subjected to any of the volumetric leakage assessment tests prescribed in the