

§ 173.419

(e) Pyrophoric Class 7 (radioactive) materials transported by aircraft must be packaged in Type B packages.

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended at 68 FR 45038, July 31, 2003; 70 FR 56098, Sept. 23, 2005]

§ 173.419 Authorized packages—oxidizing Class 7 (radioactive) materials.

(a) An oxidizing Class 7 (radioactive) material, as referenced in the §172.101 table of this subchapter, is authorized in quantities not exceeding an A₂ per package, in a DOT Specification 7A package provided that—

- (1) The contents are:
 - (i) Not fissile;
 - (ii) Packed in inside packagings of glass, metal or compatible plastic; and
 - (iii) Cushioned with a material that will not react with the contents; and
- (2) The outside packaging is made of wood, metal, or plastic.
- (b) The package must be capable of meeting the applicable test requirements of §173.465 without leakage of contents.
- (c) For shipment by air, the maximum quantity in any package may not exceed 11.3 kg (25 pounds).

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

§ 173.420 Uranium hexafluoride (fissile, fissile excepted and non-fissile).

(a) In addition to any other applicable requirements of this subchapter, quantities greater than 0.1 kg of fissile, fissile excepted or non-fissile uranium hexafluoride must be offered for transportation as follows:

- (1) Before initial filling and during periodic inspection and test, packagings must be cleaned in accordance with American National Standard N14.1 (IBR, see §171.7 of this subchapter).
- (2) Packagings must be designed, fabricated, inspected, tested and marked in accordance with—
 - (i) American National Standard N14.1 in effect at the time the packaging was manufactured;
 - (ii) Specifications for Class DOT-106A multi-unit tank car tanks (see §§ 179.300 and 179.301 of this subchapter); or

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(iii) Section VIII of the ASME Code (IBR, see §171.7 of this subchapter), provided the packaging—

- (A) Was manufactured on or before June 30, 1987;
- (B) Conforms to the edition of the ASME Code in effect at the time the packaging was manufactured;
- (C) Is used within its original design limitations; and
- (D) Has shell and head thicknesses that have not decreased below the minimum value specified in the following table:

Packaging model	Minimum thickness, millimeters (inches)
1S, 2S	1.58 (0.062)
5A, 5B, 8A	3.17 (0.125)
12A, 12B	4.76 (0.187)
30B	7.93 (0.312)
48A, F, X, and Y	12.70 (0.500)
48T, O, OM, OM Allied, HX, H, and G ...	6.35 (0.250)

- (3) Each package shall be designed so that it will:
 - (i) withstand a hydraulic test at an internal pressure of at least 1.4 MPa (200 psi) without leakage;
 - (ii) withstand the test specified in §173.465(c) without loss or dispersal of the uranium hexafluoride; and
 - (iii) withstand the test specified in 10 CFR 71.73(c)(4) without rupture of the containment system.
- (4) Uranium hexafluoride must be in solid form.
- (5) The volume of solid uranium hexafluoride, except solid depleted uranium hexafluoride, at 20 °C (68 °F) may not exceed 61% of the certified volumetric capacity of the packaging. The volume of solid depleted uranium hexafluoride at 20 °C (68 °F) may not exceed 62% of the certified volumetric capacity of the packaging.
- (6) The pressure in the package at 20 °C (68 °F) must be less than 101.3 kPa (14.8 psig).
 - (b) Each packaging for uranium hexafluoride must be periodically inspected, tested, marked and otherwise conform with the American National Standard N14.1.
 - (c) Each repair to a packaging for uranium hexafluoride must be performed in accordance with the American National Standard N14.1.
 - (d) Non-fissile uranium hexafluoride, in quantities of less than 0.1 kg, may

be shipped in packaging that meets §§ 173.24, 173.24a, and 173.410.

[69 FR 3675, Jan. 26, 2004; 69 FR 55118, Sept. 13, 2004]

§ 173.421 Excepted packages for limited quantities of Class 7 (radioactive) materials.

(a) A Class 7 (radioactive) material with an activity per package which does not exceed the limited quantity package limits specified in Table 4 in § 173.425, and its packaging, are excepted from requirements in this subchapter for specification packaging, labeling, marking (except for the UN identification number marking requirement described in § 173.422(a)), and if not a hazardous substance or hazardous waste, shipping papers, and the requirements of this subpart if:

(1) Each package meets the general design requirements of § 173.410;

(2) The radiation level at any point on the external surface of the package does not exceed 0.005 mSv/hour (0.5 mrem/hour);

(3) The nonfixed (removable) radioactive surface contamination on the external surface of the package does not exceed the limits specified in § 173.443(a);

(4) The outside of the inner packaging or, if there is no inner packaging, the outside of the packaging itself bears the marking "Radioactive";

(5) The package does not contain fissile material unless excepted by § 173.453.

(6) The material is otherwise prepared for shipment as specified in accordance with § 173.422.

(b) A limited quantity of Class 7 (radioactive) material that is a hazardous substance or a hazardous waste, is not subject to the provisions in § 172.203(d) or § 172.204(c)(4) of this subchapter.

[Amdt. 173-244, 60 FR 50307, Sept. 28, 1995, as amended at 69 FR 3675, Jan. 26, 2004; 70 FR 56098, Sept. 23, 2005]

§ 173.422 Additional requirements for excepted packages containing Class 7 (radioactive) materials.

An excepted package of Class 7 (radioactive) material that is prepared for shipment under the provisions of § 173.421, § 173.424, § 173.426, or § 173.428 is not subject to any additional require-

ments of this subchapter, except for the following:

(a) The outside of each package must be marked with the four digit UN identification number for the material preceded by the letters UN, as shown in column (4) of the Hazardous Materials Table in § 172.101 of this subchapter;

(b) Sections 171.15 and 171.16 of this subchapter, pertaining to the reporting of incidents;

(c) Sections 174.750, 175.700(b), and 176.710 of this subchapter (depending on the mode of transportation), pertaining to the reporting of decontamination;

(d) The training requirements of subpart H of part 172 of this subchapter; and

(e) For materials that meet the definition of a hazardous substance or a hazardous waste, the shipping paper requirements of subpart C of part 172 of this subchapter.

[69 FR 3675, Jan. 26, 2004]

§ 173.423 Requirements for multiple hazard limited quantity Class 7 (radioactive) materials.

(a) Except as provided in § 173.4, when a limited quantity radioactive material meets the definition of another hazard class or division, it must be—

(1) Classed for the additional hazard;

(2) Packaged to conform with the requirements specified in § 173.421(a)(1) through (a)(5) or § 173.424(a) through (g), as appropriate; and

(3) Offered for transportation in accordance with the requirements applicable to the hazard for which it is classed.

(b) A limited quantity Class 7 (radioactive) material which is classed other than Class 7 in accordance with this subchapter is excepted from the requirements of §§ 173.422(a), 172.203(d), and 172.204(c)(4) of this subchapter if the entry "Limited quantity radioactive material" appears on the shipping paper in association with the basic description.

§ 173.424 Excepted packages for radioactive instruments and articles.

A radioactive instrument or article and its packaging are excepted from requirements in this subchapter for specification packaging, labeling, marking