area, terminal building, storeroom, waterfront pier, or assembly yard, must be limited so that the total sum of the criticality safety indices in any individual group of such packages and overpacks does not exceed 50. Groups of such packages and overpacks must be stored so as to maintain a spacing of at least 6 m (20 feet) from all other groups of such packages and overpacks.

(b) Storage requirements for Class 7 (radioactive) material transported in vessels are described in subpart M of part 176 of this subchapter.


§ 173.448 General transportation requirements.

(a) Each shipment of Class 7 (radioactive) materials must be secured to prevent shifting during normal transportation conditions.

(b) Except as provided in §§174.81, 176.83, and 177.848 of this subchapter, or as otherwise required by the Competent Authority in the applicable certificate, a package or overpack of Class 7 (radioactive) materials may be carried among packaged general cargo without special stowage provisions, if—

(1) The heat output in watts does not exceed 0.1 times the minimum package dimension in centimeters; or

(2) The average surface heat flux of the package or overpack does not exceed 15 watts per square meter and the immediately surrounding cargo is not in sacks or bags or otherwise in a form that would seriously impede air circulation for heat removal.

(c) Packages or overpacks bearing labels prescribed in §172.403 of this subchapter may not be carried in compartments occupied by passengers, except for couriers accompanying those packages.

(d) Mixing of different kinds of packages that include fissile packages is authorized only in accordance with §173.459.

(e) No person shall offer for transportation or transport aboard a passenger-carrying aircraft any single package or overpack with a transport index greater than 3.0.

(f) No person shall offer for transportation or transport aboard a passenger-carrying aircraft any Class 7 (radioactive) material unless that material is intended for use in, or incident to, research, medical diagnosis or treatment.

(g) If an overpack is used to consolidate individual packages or to enclose a single package of Class 7 (radioactive) materials, the package(s) must comply with the packaging, marking, and labeling requirements of this subchapter, and:

(1) The overpack must be labeled as prescribed in §172.403(h) of this subchapter;

(2) The overpack must be marked as prescribed in subpart D of part 172 of this subchapter and §173.25(a); and

(3) The transport index of the overpack may not exceed 3.0 for passenger-carrying aircraft shipments, or 10.0 for cargo-aircraft shipments.

(A) 69 FR 3691, Jan. 26, 2004)

§ 173.453 Fissile materials—exceptions.

Fissile materials meeting the requirements of at least one of the paragraphs (a) through (f) of this section are excepted from the requirements of this subpart for fissile materials, including the requirements of §§173.457 and 173.459, but are subject to all other requirements of this subpart, except as noted.

(a) An individual package containing 2 grams or less of fissile material.

(b) An individual or bulk packaging containing 15 grams or less of fissile material provided the package has at least 200 grams of solid nonfissile material for every gram of fissile material. Lead, beryllium, graphite, and hydrogenous material enriched in deuterium may be present in the package but must not be included in determining the required mass for solid nonfissile material.

(c) Low concentrations of solid fissile material commingled with solid nonfissile material, provide that:

(1) There is at least 2000 grams of nonfissile material for every gram of fissile material, and

(2) There is no more than 180 grams of fissile material distributed within
§ 173.461 Demonstration of compliance with tests.

(a) Compliance with the design requirements in §173.412 and the test requirements in §§173.465 through 173.469 must be shown by any of the methods prescribed in this paragraph, or by a combination of these methods appropriate for the particular feature being evaluated:

(1) Performance of tests with prototypes or samples of the specimens representing LSA-III, special form Class 7 (radioactive) material, or packaging, in which case the contents of the packaging for the test must simulate as closely as practicable the expected range of physical properties of the radioactive contents or packaging to be vessels, the total sum of CSI's in a freight container or on a conveyance may not exceed 100.

(f) Exclusive use shipments of fissile material packages must satisfy the radiation level and administrative requirements of §173.441(b).

(g) The number of packages, overpacks and freight containers containing fissile material stored in transit in any one storage area must be so limited that the total sum of the CSI's in any group of packages, overpacks or freight containers does not exceed 50. Groups of packages shall be stored so as to maintain a spacing of a least 6 m (20 ft) between the closest surfaces of any two groups.

(h) Provisions for shipment by vessel of Class 7 (radioactive) material packages, including fissile material packages by vessel are described in §§176.700-176.720 of this subchapter.

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