

damage to container in handling. The exposure to this danger decreases directly with the isolation of the unloading point.

[29 FR 18773, Dec. 29, 1964. Redesignated at 32 FR 5606, Apr. 5, 1967, and by Amdt. 173–162, 48 FR 10226, Mar. 10, 1983, and amended by Amdt. 173–180, 49 FR 42735, Oct. 24, 1984; Amdt. 173–207, 53 FR 38274, Sept. 29, 1988; Amdt. 173–224, 55 FR 52608, Dec. 21, 1990; 56 FR 66265, Dec. 20, 1991; Amdt. 173–234, 58 FR 51532, Oct. 1, 1993; 67 FR 61013, Sept. 27, 2002]

§ 173.11 Exceptions for shipment of light bulbs containing hazardous materials.

The following light bulbs (lamps) are not subject to any other requirements of this subchapter provided they do not contain Class 7 (radioactive) material:

(a) Light bulbs that are collected directly from individuals and households when transported to a collection or recycling facility.

(b) Light bulbs each containing not more than 1 g of hazardous materials and packaged so that there is not more than 30 g of hazardous materials per package. Each light bulb must be packed in inner packagings separated by dividers or surrounded by cushioning material to protect the light bulbs and packed into strong outer packagings meeting the requirements of § 173.24(b) of this subpart and capable of passing a 1.2 m (4 feet) drop test.

(c) Used, damaged, defective light bulbs each containing not more than 1 g of hazardous materials and packaged so that there is not more than 30 g of hazardous materials per package when transported from a collection or recycling facility. The light bulbs must be packed in strong outer packagings meeting the requirements of § 173.24(b) of this subpart and capable of passing a 1.2 m (4 feet) drop test.

(d) Light bulbs containing only gases of Division 2.2 provided they are packaged so that the projectile effects of any rupture of the bulb will be contained within the package.

[80 FR 1153, Jan. 8, 2015, as amended at 87 FR 79774, Dec. 27, 2022]

§ 173.12 Exceptions for shipment of waste materials.

(a) *Open head drums.* If a hazardous material that is a hazardous waste is required by this subchapter to be shipped in a closed head drum (i.e., a

drum with a 7.0 cm (3 inches) or less bung opening) and the hazardous waste contains solids or semisolids that make its placement in a closed head drum impracticable, an equivalent (except for closure) open head drum may be used for the hazardous waste.

(b) *Lab packs.* (1) Waste materials prohibited by paragraph (b)(3) of this section are not authorized for transport in packages authorized by this paragraph (b). Waste materials classed as Class or Division 3, 4.1, 4.2, 4.3, 5.1, 5.2, 6.1, 8, or 9 are excepted from the specification packaging requirements of this subchapter for combination packagings if packaged in accordance with this paragraph (b) and transported for disposal or recovery by highway, rail or cargo vessel. In addition, a generic description from the § 172.101 Hazardous Materials Table may be used in place of specific chemical names, when two or more chemically compatible waste materials in the same hazard class are packaged in the same outside packaging.

(2) Combination packaging requirements:

(i) *Inner packagings.* The inner packagings must be either glass, not exceeding 4 L (1 gallon) rated capacity, or metal or plastic, not exceeding 20 L (5.3 gallons) rated capacity. Inner packagings containing liquid must be surrounded by a chemically compatible absorbent material in sufficient quantity to absorb the total liquid contents.

(ii) *Outer packaging.* Each outer packaging may contain only one class of waste material. The following outer packagings are authorized except that Division 4.2 Packing Group I materials must be packaged using UN standard steel or plastic drums tested and marked to the Packing Group I performance level for liquids or solids; and bromine pentafluoride and bromine trifluoride may not be packaged using UN 4G fiberboard boxes:

(A) A UN 1A2, UN 1B2 or UN 1N2 metal drum, a UN 1D plywood drum, a UN 1G fiber drum, or a UN 1H2 plastic drum, tested and marked to at least the Packing Group III performance level for liquids or solids;

(B) At a minimum, a double-walled UN 4G fiberboard box made out of 500 pound burst-strength fiberboard fitted

with a polyethylene liner at least 3 mils (0.003 inches) thick and when filled during testing to 95 percent capacity with a solid material, successfully passes the tests prescribed in §§178.603 (drop) and 178.606 (stacking), and is capable of passing the tests prescribed in §178.608 (vibration) to at least the Packing Group II performance level for liquids or solids; or

(C) A UN 11G fiberboard intermediate bulk container (IBC) or a UN 11HH2 composite IBC, fitted with a polyethylene liner at least 6 mils (0.006 inches) thick, that successfully passes the tests prescribed in subpart O of part 178 and §178.603 to at least the Packing Group II performance level for liquids or solids; a UN 11HH2 is composed of multiple layers of encapsulated corrugated fiberboard between inner and outer layers of woven coated polypropylene.

(iii) The gross weight of each completed combination package may not exceed 205 kg (452 lbs).

(3) *Prohibited materials.* The following waste materials may not be packaged or described under the provisions of this paragraph (b): a material poisonous-by-inhalation, a temperature controlled material unless it complies with §173.21(f)(1), a Division 6.1, Packing Group I material, chloric acid, and oleum (fuming sulfuric acid).

(c) *Reuse of packagings.* A previously used packaging may be reused for the shipment of waste material transported for disposal or recovery, not subject to the reconditioning and reuse provisions contained in §173.28 and part 178 of this subchapter, under the following conditions:

(1) Except as authorized by this paragraph, the waste must be packaged in accordance with this part and offered for transportation in accordance with the requirements of this subchapter.

(2) Transportation is performed by highway only.

(3) A package is not offered for transportation less than 24 hours after it is finally closed for transportation, and each package is inspected for leakage and is found to be free from leaks immediately prior to being offered for transportation.

(4) Each package is loaded by the shipper and unloaded by the consignee,

unless the motor carrier is a private or contract carrier.

(5) The packaging may be used only once under this paragraph and may not be used again for shipment of hazardous materials except in accordance with §173.28.

(d) *Technical names for n.o.s. descriptions.* The requirements for the inclusion of technical names for n.o.s. descriptions on shipping papers and package markings, §§172.203 and 172.301 of this subchapter, respectively, do not apply to packages prepared in accordance with paragraph (b) of this section, except that packages containing materials meeting the definition of a hazardous substance must be described as required in §172.203 of this subchapter and marked as required in §172.324 of this subchapter.

(e) *Segregation requirements.* Waste materials packaged according to paragraph (b) of this section and transported in conformance with this paragraph (e) are not subject to the segregation requirements in §§174.81(d), 176.83(b), and 177.848(d) if blocked and braced in such a manner that they are separated from incompatible materials by a minimum horizontal distance of 1.2 m (4 feet) and the packages are loaded at least 100 mm (4 inches) off the floor of the freight container, unit load device, transport vehicle, or rail car. The following conditions specific to incompatible materials also apply:

(1) *General restrictions.* The freight container, unit load device, transport vehicle, or rail car may not contain any Class 1 explosives, Class 7 radioactive material, or uncontainerized hazardous materials;

(2) *Waste cyanides and waste acids.* For waste cyanides stored, loaded, and transported with waste acids:

(i) The cyanide or a cyanide mixture may not exceed 2 kg (4.4 pounds) net weight per inner packaging and may not exceed 10 kg (22 pounds) net weight per outer packaging; a cyanide solution may not exceed 2 L (0.6 gallon) per inner packaging and may not exceed 10 L (3.0 gallons) per outer packaging; and

(ii) The acids must be packaged in lab packs in accordance paragraph (b) of this section or in single packagings authorized for the acid in Column (8B) of the §172.101 Hazardous Materials

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Table of this subchapter not to exceed 208 L (55 gallons) capacity.

(3) *Waste Division 4.2 materials and waste Class 8 liquids.* For waste Division 4.2 materials stored, loaded, and transported with waste Class 8 liquids:

(i) The Division 4.2 material may not exceed 2 kg (4.4 pounds) net weight per inner packaging and may not exceed 10 kg (22 pounds) net weight per outer packaging; and

(ii) The Class 8 liquid must be packaged in lab packs in accordance with paragraph (b) of this section or in single packagings authorized for the material in Column (8B) of the §172.101 Hazardous Materials Table of this subchapter not to exceed 208 L (55 gallons) capacity.

(4) *Waste Division 6.1 Packing Group I, Hazard Zone A material and waste Class 3, Class 8 liquids, or Division 4.1, 4.2, 4.3, 5.1 and 5.2 materials.* For waste Division 6.1 Packing Group I, Hazard Zone A material stored, loaded, and transported with waste Class 8 liquids, or Division 4.2, 4.3, 5.1 and 5.2 materials:

(i) The Division 6.1 Packing Group I, Hazard Zone A material must be packaged in accordance with §173.226(c) of this subchapter and overpacked in a UN standard steel or plastic drum meeting the Packing Group I performance level;

(ii) The Class 8 liquid must be packaged in lab packs in accordance with paragraph (b) of this section or in single packagings authorized for the material in Column (8B) of the §172.101 Hazardous Materials Table of this subchapter not to exceed 208 L (55 gallons) capacity.

(iii) The Division 4.2 material may not exceed 2 kg (4.4 pounds) net weight per inner packaging and may not exceed 10 kg (22 pounds) net weight per outer packaging;

(iv) The Division 5.1 materials may not exceed 2 kg (4.4 pounds) net weight per inner packaging and may not exceed 10 kg (22 pounds) net weight per outer packaging. The aggregate net weight per freight container, unit load device, transport vehicle, or rail car may not exceed 100 kg (220 pounds);

(v) The Division 5.2 material may not exceed 1 kg (2.2 pounds) net weight per inner packaging and may not exceed 5 kg (11 pounds) net weight per outer

packaging. Organic Peroxide, Type B material may not exceed 0.5 kg (1.1 pounds) net weight per inner packaging and may not exceed 2.5 kg (5.5 pounds) net weight per outer packaging. The aggregate net weight per freight container, unit load device, transport vehicle, or rail car may not exceed 50 kg (110 pounds).

(f) *Additional exceptions.* Lab packs conforming to the requirements of this section are not subject to the following:

(1) The overpack marking and labeling requirements in §173.25(a)(2) of this subchapter when secured to a pallet with shrink-wrap or stretch-wrap except that labels representative of each Hazard Class or Division in the overpack must be visibly displayed on two opposing sides.

(2) The restrictions for overpacks containing Class 8, Packing Group I material and Division 5.1, Packing Group I material in §173.25(a)(5) of this subchapter. These waste materials may be overpacked with other materials.

(g) *Household waste.* Household waste, as defined in §171.8 of this subchapter, is not subject to the requirements of this subchapter when transported in accordance with applicable state, local, or tribal requirements.

(h) *Shrink-wrapped or stretch-wrapped pallets of limited quantity waste.* Shrink-wrapped or stretch-wrapped pallets containing packages of waste limited quantity materials may be transported by motor vehicle and cargo vessel under the following conditions:

(1) The waste materials must be in their original undamaged packaging marked with the authorized limited quantity marking in conformance with §172.315 of this subchapter, as appropriate. The word “waste” in association with the proper shipping name is not required on individual packages;

(2) Packages must be securely affixed to a pallet and shrink-wrapped or stretch-wrapped;

(3) The outside of the shrink-wrap or stretch-wrap must be marked on opposite sides with “Waste, Limited Quantity.”

[Amdt. 173–224, 55 FR 52609, Dec. 21, 1990]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §173.12, see the List of CFR Sections Affected, which appears in the

Finding Aids section of the printed volume and at www.govinfo.gov.

§ 173.13 Exceptions for Class 3, Divisions 4.1, 4.2, 4.3, 5.1, 6.1, and Classes 8 and 9 materials.

(a) A Class 3, 8 or 9, or Division 4.1, 4.2, 4.3, 5.1, or 6.1 material is excepted from the labeling (except for the CARGO AIRCRAFT ONLY label), placarding and segregation requirements of this subchapter if prepared for transportation in accordance with the requirements of this section. A material that meets the definition of a material poisonous by inhalation may not be offered for transportation or transported under provisions of this section.

(b) A hazardous material conforming to the requirements of this section may be transported by motor vehicle and rail car. In addition, packages prepared in accordance with this section may be transported by aircraft under the following conditions:

(1) *Cargo-only aircraft.* Only hazardous materials permitted to be transported aboard either a passenger or cargo-only aircraft by column (9A) or (9B) of the Hazardous Materials Table in §172.101 of this subchapter are authorized aboard cargo-only aircraft.

(2) *Passenger carrying aircraft.* Only hazardous materials permitted to be transported aboard a passenger aircraft by column (9A) of the Hazardous Materials Table in §172.101 of this subchapter are authorized aboard passenger aircraft. The completed package, assembled as for transportation, must be successfully tested in accordance with part 178 of this subchapter at the Packing Group I level. A hazardous material which meets the definition of a Division 5.1 (oxidizer) at the Packing Group I level in accordance with §173.127(b)(1)(i) of this subchapter may not be transported aboard a passenger aircraft.

(3) Packages offered for transportation aboard either passenger or cargo-only aircraft must meet the requirements for transportation by aircraft specified in §173.27 of this subchapter.

(c) A hazardous material permitted by paragraph (a) of this section must be packaged as follows:

(1) For liquids:

(i) The hazardous material must be placed in a tightly closed glass, plastic or metal inner packaging with a maximum capacity not exceeding 1.2 L. Sufficient outage must be provided such that the inner packaging will not become liquid full at 55 °C (130 °F). The net quantity (measured at 20 °C (68 °F)) of liquid in any inner packaging may not exceed 1 L. For transportation by aircraft, the net quantity in one package may not exceed the quantity specified in columns (9A) or (9B), as appropriate.

(ii) The inner packaging must be placed in a hermetically sealed barrier bag which is impervious to the lading, and then wrapped in a non-reactive absorbent material in sufficient quantity to completely absorb the contents of the inner packaging. Alternatively, the inner packaging may first be wrapped in a non-reactive absorbent material and then placed in the hermetically sealed barrier bag. The combination of inner packaging, absorbent material, and bag must be placed in a snugly fitting metal can.

(iii) The metal can must be securely closed. For liquids that are in Division 4.2 or 4.3, the metal can must be hermetically sealed. For Division 4.2 materials in Packing Group I, the metal can must be tested in accordance with part 178 of this subchapter at the Packing Group I performance level.

(iv) The metal can must be placed in a fiberboard box that is placed in a hermetically sealed barrier bag which is impervious to the lading.

(v) The intermediate packaging must be placed inside a securely closed, outer packaging conforming to §173.201.

(vi) Not more than four intermediate packagings are permitted in an outer packaging.

(2) For solids:

(i) The hazardous material must be placed in a tightly closed glass, plastic or metal inner packaging. The net quantity of material in any inner packaging may not exceed 2.85kg (6.25 pounds). For transportation by aircraft, the net quantity in one package may not exceed the quantity specified in columns (9A) or (9B), as appropriate.