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(5) For shipments by aircraft, the maximum quantity contained in each primary receptacle, including any material used to stabilize or prevent degradation of the sample, may not exceed 1 L (34 ounces), and the maximum quantity contained in each outer packaging, including any material used to stabilize or prevent degradation of the samples, may not exceed 4 L (1 gallon). The outer packaging limitation does not include ice, dry ice, or liquid nitrogen when used to maintain the integrity of the material.

(c) *Solid Category B infectious substances.* Solid Category B infectious substances must be packaged in a triple packaging, consisting of a primary receptacle, secondary packaging, and outer packaging, conforming to the following provisions:

(1) The primary receptacle must be siftproof.

(2) If several fragile primary receptacles are placed in a single secondary packaging, they must be either individually wrapped or separated to prevent contact between them.

(3) The secondary packaging must be siftproof.

(4) If residual liquid may be present in the primary receptacle during transportation, then the material must be transported in accordance with requirements in paragraph (b) of this section. A solid material that may become liquid during transportation must be transported in accordance with paragraph (b) of this section.

(5) Except for packages containing body parts, organs, or whole bodies, for shipment by aircraft, the outer packaging may not contain more than 4 kg (8.8 pounds), including any material used to stabilize or prevent degradation of the samples. The outer packaging limitation does not include ice, dry ice, or liquid nitrogen when used to maintain the integrity of the material.

(d) *Refrigerated or frozen specimens (ice, dry ice, and liquid nitrogen).* In addition to complying with the requirements in this paragraph (d), dry ice and liquid nitrogen must be offered for transportation or transported in accordance with the applicable requirements of this subchapter.

(1) Ice or dry ice must be placed outside the secondary packaging or in an overpack. Interior supports must be provided to secure the secondary packagings in the original position after the ice or dry ice has dissipated. If ice is used, the outside packaging must be leakproof or must have a leakproof liner. If dry ice is used, the outside packaging must permit the release of carbon dioxide gas and otherwise meet the provisions in §173.217. The primary receptacle and secondary packaging must maintain their integrity at the temperature of the refrigerant used, as well as the temperatures and pressures of transport by aircraft they could be subjected to if refrigeration were lost, and sufficient absorbent material must be provided to absorb all liquid, including melted ice.

(2) The package is marked ''Carbon dioxide, solid'' or ''Dry ice'' and an indication that the material being refrigerated is used for diagnostic treatment purposes (e.g., frozen medical specimens).

(e) *Training.* Each person who offers or transports a Category B infectious substance under the provisions of this section must know about the requirements of this section.

[67 FR 53142, Aug. 14, 2002, as amended at 71 FR 32261, June 2, 2006; 72 FR 55693, Oct. 1, 2007]

§173.201 Non-bulk packagings for liquid hazardous materials in Packing Group I.

(a) When §172.101 of this subchapter specifies that a liquid hazardous material be packaged under this section, only non-bulk packagings prescribed in this section may be used for its transportation. Each packaging must conform to the general packaging requirements of subpart B of part 173, to the requirements of part 178 of this subchapter at the Packing Group I performance level, and to the requirements of the special provisions of column 7 of the §172.101 table.

(b) The following combination packagings are authorized:

Outer packagings:
Steel drum: 1A1 or 1A2
Aluminum drum: 1B1 or 1B2
Metal drum other than steel or aluminum: 1N1 or 1N2
Plywood drum: 1D
Fiber drum: 1G
Plastic drum: 1H1 or 1H2

Steel jerrican: 3A1 or 3A2
Plastic jerrican: 3H1 or 3H2
Aluminum jerrican: 3B1 or 3B2
Steel box: 4A
Aluminum box: 4B
Natural wood box: 4C1 or 4C2
Plywood box: 4D
Reconstituted wood box: 4F
Fiberboard box: 4G
Expanded plastic box: 4H1
Solid plastic box: 4H2

Inner packagings:
Glass or earthenware receptacles
Plastic receptacles
Metal receptacles
Glass ampoules

(c) Except for transportation by passenger aircraft, the following single packagings are authorized:

Steel drum: 1A1 or 1A2
Aluminum drum: 1B1 or 1B2
Metal drum other than steel, or aluminum: 1N1 or 1N2
Plastic drum: 1H1 or 1H2
Steel jerrican: 3A1 or 3A2
Plastic jerrican: 3H1 or 3H2
Aluminum jerrican: 3B1 or 3B2
Plastic receptacle in steel, aluminum, fiber or plastic drum: 6HA1, 6HB1, 6HG1, 6HH1
Plastic receptacle in steel, aluminum, wooden, plywood or fiberboard box: 6HA2, 6HB2, 6HC, 6HD2 or 6HG2
Glass, porcelain or stoneware in steel, aluminum or fiber drum: 6PA1, 6PB1 or 6PG1
Glass, porcelain or stoneware in steel, aluminum, wooden or fiberboard box: 6PA2, 6PB2, 6PC or 6PG2
Glass, porcelain or stoneware in solid or expanded plastic packaging: 6PH1 or 6PH2
Cylinders, specification or UN standard, as prescribed for any compressed gas, except 3HT and those prescribed for acetylene.

[Amdt. 173–224, 55 FR 52634, Dec. 21, 1990, as amended by Amdt. 173–241, 59 FR 67518, Dec. 29, 1994; Amdt. 173–261, 62 FR 24734, May 6, 1997; 71 FR 33880, June 12, 2006]

§ 173.202 Non-bulk packagings for liquid hazardous materials in Packing Group II.

(a) When §172.101 of this subchapter specifies that a liquid hazardous material be packaged under this section, only non-bulk packagings prescribed in this section may be used for its transportation. Each packaging must conform to the general packaging requirements of subpart B of part 173, to the requirements of part 178 of this subchapter at the Packing Group I or II performance level (unless otherwise excepted), and to the particular requirements of the special provisions of column 7 of the §172.101 table.

(b) The following combination packagings are authorized:

Outer packagings:
Steel drum: 1A1 or 1A2
Aluminum drum: 1B1 or 1B2
Metal drum other than steel or aluminum: 1N1 or 1N2
Plywood drum: 1D
Fiber drum: 1G
Plastic drum: 1H1 or 1H2
Wooden barrel: 2C2
Steel jerrican: 3A1 or 3A2
Plastic jerrican: 3H1 or 3H2
Aluminum jerrican: 3B1 or 3B2
Steel box: 4A
Aluminum box: 4B
Natural wood box: 4C1 or 4C2
Plywood box: 4D
Reconstituted wood box: 4F
Fiberboard box: 4G
Expanded plastic box: 4H1
Solid plastic box: 4H2

Inner packagings:
Glass or earthenware receptacles
Plastic receptacles
Metal receptacles
Glass ampoules

(c) Except for transportation by passenger aircraft, the following single packagings are authorized:

Steel drum: 1A1 or 1A2
Aluminum drum: 1B1 or 1B2
Metal drum other than steel or aluminum: 1N1 or 1N2
Plastic drum: 1H1 or 1H2
Fiber drum: 1G (with liner)
Wooden barrel: 2C1
Steel jerrican: 3A1 or 3A2
Plastic jerrican: 3H1 or 3H2
Aluminum jerrican: 3B1 or 3B2
Plastic receptacle in steel, aluminum, fiber or plastic drum: 6HA1, 6HB1, 6HG1 or 6HH1
Plastic receptacle in steel, aluminum, wooden, plywood or fiberboard box: 6HA2, 6HB2, 6HC, 6HD2 or 6HG2
Glass, porcelain or stoneware in steel, aluminum or fiber drum: 6PA1, 6PB1 or 6PG1
Glass, porcelain or stoneware in steel, aluminum, wooden or fiberboard box: 6PA2, 6PB2, 6PC or 6PG2
Glass, porcelain or stoneware in solid or expanded plastic packaging: 6PH1 or 6PH2
Plastic receptacle in plywood drum: 6HD1
Glass, porcelain or stoneware in plywood drum or wickerwork hamper: 6PDl or 6PD2