

**§ 173.162 Gallium.**

(a) Except when packaged in cylinders or steel flasks, gallium must be packaged in packagings which meet the requirements of part 178 of this subchapter at the Packing Group I performance level for transportation by aircraft, and at the Packing Group III performance level for transport by highway, rail or vessel, as follows:

(1) In combination packagings intended to contain liquids consisting of glass, earthenware or rigid plastic inner packagings with a maximum net mass of 15 kg (33 pounds) each. The inner packagings must be packed in wood boxes (4C1, 4C2, 4D, 4F), fiberboard boxes (4G), plastic boxes (4H1, 4H2), fiber drums (1G) or removable head steel and plastic drums or jerricans (1A2, 1H2, 3A2 or 3H2) with sufficient cushioning materials to prevent breakage. Either the inner packagings or the outer packagings must have an inner liner that is leakproof or bags of strong leakproof and puncture-resistant material impervious to the contents and completely surrounding the contents to prevent it from escaping from the package, irrespective of its position.

(2) In packagings intended to contain liquids consisting of semi-rigid plastic inner packagings of not more than 2.5 kg (5.5 pounds) net capacity each, individually enclosed in a sealed, leak-tight bag of strong puncture-resistant material. The sealed bags must be packed in wooden (4C1, 4C2), plywood (4D), reconstituted wood (4F), fiberboard (4G) or plastic (4H1, 4H2) boxes or in fiber (1G) or steel (1A2) drums, which are lined with leak-tight, puncture-resistant material. Bags and liner material must be chemically resistant to gallium.

(3) Cylinders and steel flasks with vaulted bottoms are also authorized.

(b) When it is necessary to transport gallium at low temperatures in order to maintain it in a completely solid state, the above packagings may be overpacked in a strong, water-resistant outer packaging which contains dry ice or other means of refrigeration. If a refrigerant is used, all of the above materials used in the packaging of gallium must be chemically and physically resistant to the refrigerant and must

have impact resistance at the low temperatures of the refrigerant employed. If dry ice is used, the outer packaging must permit the release of carbon dioxide gas.

(c) Manufactured articles or apparatuses, each containing not more than 100 mg (0.0035 ounce) of gallium and packaged so that the quantity of gallium per package does not exceed 1 g (0.35 ounce) are not subject to the requirements of this subchapter.

[64 FR 10777, Mar. 5, 1999; as amended at 66 FR 33430, June 21, 2001]

**§ 173.163 Hydrogen fluoride.**

(a) Hydrogen fluoride (hydrofluoric acid, anhydrous) must be packaged as follows:

(1) In specification 3, 3A, 3AA, 3B, 3BN, or 3E cylinders; or in specification 4B, 4BA, or 4BW cylinders except that brazed 4B, 4BA, and 4BW cylinders are not authorized. The filling density may not exceed 85 percent of the cylinder's water weight capacity. In place of the periodic volumetric expansion test, cylinders used in exclusive service may be given a complete external visual inspection in conformance with part 180, subpart C, of this subchapter, at the time such requalification becomes due.

(2) In a UN cylinder, as specified in part 178 of this subchapter, having a minimum test pressure of 10 bar and a maximum filling ratio of 0.84.

(b) A cylinder removed from hydrogen fluoride service must be condemned in accordance with § 180.205 of this subchapter. Alternatively, at the direction of the owner, the requalifier may render the cylinder incapable of holding pressure.

[71 FR 33880, June 12, 2006]

**§ 173.164 Mercury (metallic and articles containing mercury).**

(a) For transportation by aircraft, mercury must be packaged in packagings which meet the requirements of part 178 of this subchapter at the Packing Group I performance level, as follows:

(1) In inner packagings of earthenware, glass or plastic containing not more than 3.5 kg (7.7 pounds) of mercury, or inner packagings which are glass ampoules containing not more

than 0.5 kg (1.1 pounds) of mercury, or iron or steel quicksilver flasks containing not more than 35 kg (77 pounds) of mercury. The inner packagings or flasks must be packed in steel drums (1A2), steel jerricans (3A2), wooden boxes (4C1), (4C2), plywood boxes (4D), reconstituted wood boxes (4F), fiberboard boxes (4G), plastic boxes (4H2), plywood drums (1D) or fiber drums (1G).

(2) [Reserved]

(3) When inner packagings of earthenware, glass or plastic are used, they must be packed in the outer packaging with sufficient cushioning material to prevent breakage.

(4) Either the inner packagings or the outer packagings must have inner linings or bags of strong leakproof and puncture-resistant material impervious to mercury, completely surrounding the contents, so that the escape of mercury will be prevented irrespective of the position of the package.

(b) Manufactured articles or apparatuses, each containing not more than 100 mg (0.0035 ounce) of mercury and packaged so that the quantity of mercury per package does not exceed 1 g (0.035 ounce) are not subject to the requirements of this subchapter.

(c) Manufactured articles or apparatuses containing mercury are excepted from the specification packaging requirements of this subchapter when packaged as follows:

(1) Manufactured articles or apparatuses of which metallic mercury is a component part, such as manometers, pumps, thermometers, switches, etc. (for electron tubes, mercury vapor tubes and similar tubes, see paragraph (c)(3) of this section), must be in strong outer packagings, having sealed inner liners or bags of strong leakproof and puncture-resistant material impervious to mercury, which will prevent the escape of mercury from the package irrespective of its position. Mercury switches and relays are excepted from these packaging requirements, if they are totally enclosed, leakproof and in sealed metal or plastic units.

(2) Thermometers, switches and relays, each containing a total quantity of not more than 15 g (0.53 ounces) of mercury, are excepted from the re-

quirements of this subchapter if installed as an integral part of a machine or apparatus and so fitted that shock of impact damage, leading to leakage of mercury, is unlikely to occur under conditions normally incident to transport.

(3) Electron tubes, mercury vapor tubes and similar tubes must be packaged as follows:

(i) Tubes which are packed in strong outer packagings with all seams and joints sealed with self-adhesive, pressure-sensitive tape which will prevent the escape of mercury from the package, are authorized up to a total net quantity of 450 g (15.9 ounces) of mercury per package;

(ii) Tubes with more than 450 g (15.9 ounces) of mercury are authorized only when packed in strong outer packagings, having sealed inner liners or bags of strong leakproof and puncture-resistant material impervious to mercury which will prevent escape of mercury from the package irrespective of its position;

(iii) Tubes which do not contain more than 5 g (0.2 ounce) of mercury each and which are packed in the manufacturer's original packagings, are authorized up to a total net quantity of 30 g (1.1 ounces) of mercury per package;

(iv) Tubes which are completely jacketed in sealed leakproof metal cases are authorized in the manufacturer's original packagings.

(4) A person offering for transportation electron tubes, mercury vapor tubes, and similar tubes shall indicate the quantity of mercury therein on the shipping paper.

(5) Mercurial barometers conforming to paragraph (c)(1) of this section, which are loaded and unloaded from an aircraft under the supervision of, and accompanied in flight by, a National Weather Service official or similar United States agency official, are excepted from any other requirements of this subchapter.

(d) For transportation by other than aircraft, mercury must be packaged—

(1) In any packaging which meets the requirements of part 178 of this subchapter at the Packing Group III performance level; or

(2) In non-specification reusable metal packagings.

(e) Except for a hazardous substance or a hazardous waste or for transportation by aircraft or vessel, packages containing less than 0.45 kg (1.0 pound) net weight of mercury are not subject to the requirements of this subchapter.

[Amdt. 173-224, 55 FR 52643, Dec. 21, 1990, as amended at 56 FR 66270, Dec. 20, 1991; Amdt. 173-241, 59 FR 67509, Dec. 29, 1994; Amdt. 173-246, 60 FR 49110, Sept. 21, 1995; 64 FR 10777, 10778, Mar. 5, 1999; 68 FR 57632, Oct. 6, 2003]

**§ 173.166 Air bag inflators, air bag modules and seat-belt pretensioners.**

(a) *Definitions.* An *air bag inflator* (consisting of a casing containing an igniter, a booster material, a gas generant and, in some cases, a pressure vessel (cylinder)) is a gas generator used to inflate an air bag in a supplemental restraint system in a motor vehicle. An *air bag module* is the air bag inflator plus an inflatable bag assembly. A *seat-belt pre-tensioner* contains similar hazardous materials and is used in the operation of a seat-belt restraining system in a motor vehicle.

(b) *Classification.* An air bag inflator, air bag module, or seat-belt pretensioner may be classed as Class 9 (UN3268) if:

(1) The manufacturer has submitted each design type air bag inflator, air bag module, or seat-belt pretensioner to a person approved by the Associate Administrator, in accordance with § 173.56(b), for examination and testing. The submission must contain a detailed description of the inflator or pretensioner or, if more than a single inflator or pretensioner is involved, the maximum parameters of each particular inflator or pretensioner design type for which approval is sought and details on the complete package. The manufacturer must submit an application, including the test results and report recommending the shipping description and classification for each device or design type to the Associate Administrator, and must receive written notification from the Associate Administrator that the device has been approved for transportation and assigned an EX number; or,

(2) The manufacturer has submitted an application, including a classification issued by the competent authority

of a foreign government to the Associate Administrator, and received written notification from the Associate Administrator that the device has been approved for transportation and assigned an EX number.

(c) *EX numbers.* When offered for transportation, the shipping paper must contain the EX number or product code for each approved inflator, module or pretensioner in association with the basic description required by § 172.202(a) of this subchapter. Product codes must be traceable to the specific EX number assigned to the inflator, module or pretensioner by the Associate Administrator. The EX number or product code is not required to be marked on the outside package.

(d) *Exceptions.* (1) An air bag module or seat-belt pretensioner that has been approved by the Associate Administrator and is installed in a motor vehicle, aircraft, boat or other transport conveyance or its completed components, such as steering columns or door panels, is not subject to the requirements of this subchapter.

(2) An air bag module containing an inflator that has been previously approved for transportation is not required to be submitted for further examination or approval.

(3) An air bag module containing an inflator that has previously been approved as a Division 2.2 material is not required to be submitted for further examination to be reclassified as a Class 9 material.

(4) *Shipments for recycling.* When offered for domestic transportation by highway, rail freight, cargo vessel or cargo aircraft, a serviceable air bag module or seat-belt pretensioner removed from a motor vehicle that was manufactured as required for use in the United States may be offered for transportation and transported without compliance with the shipping paper requirement prescribed in paragraph (c) of this section. However, the word "Recycled" must be entered on the shipping paper immediately after the basic description prescribed in § 172.202 of this subchapter. No more than one device is authorized in the packaging prescribed in paragraph (e)(1), (2) or (3) of this section. The device must be