

(9) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66284, Dec. 20, 1991; Amdt. 178-110, 60 FR 49111, Sept. 21, 1995]

**§ 178.505 Standards for aluminum drums.**

(a) The following are the identification codes for aluminum drums:

(1) 1B1 for a non-removable head aluminum drum; and

(2) 1B2 for a removable head aluminum drum.

(b) Construction requirements for aluminum drums are as follows:

(1) Body and heads must be constructed of aluminum at least 99 percent pure or an aluminum base alloy. Material must be of suitable type and adequate thickness in relation to the capacity and the intended use of the drum. Minimum thickness and marking requirements in §§173.28(b)(4) and 178.503(a)(9) of this subchapter apply to drums intended for reuse.

(2) All seams must be welded. Chime seams, if any, must be reinforced by the application of separate reinforcing rings.

(3) The body of a drum of a capacity greater than 60 L (16 gallons) may have at least two expanded rolling hoops or two separate rolling hoops. If there are separate rolling hoops, the hoops must be fitted tightly on the body and so secured that they cannot shift. Rolling hoops may not be spot-welded.

(4) Openings for filling, emptying, or venting in the bodies or heads of non-removable head (1B1) drums may not exceed 7.0 cm (3 inches) in diameter. Drums with larger openings are considered to be of the removable head type (1B2). Closures for openings in the bodies and heads of drums must be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges may be welded in place so that the weld provides a leakproof seam. Gaskets or other sealing elements must be used with closures unless the closure is inherently leakproof.

(5) Closure devices for removable head drums must be so designed and applied that they remain secure and drums remain leakproof under normal conditions of transport. Gaskets or

other sealing elements must be used with all removable heads.

(6) Maximum capacity of drum: 450 L (119 gallons).

(7) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66284, Dec. 20, 1991; Amdt. 178-102, 59 FR 28494, June 2, 1994]

**§ 178.506 Standards for metal drums other than steel or aluminum.**

(a) The following are the identification codes for metal drums other than steel or aluminum:

(1) 1N1 for a non-removable head metal drum; and

(2) 1N2 for a removable head metal drum.

(b) Construction requirements for metal drums other than steel or aluminum are as follows:

(1) Body and heads must be constructed of metal (other than steel or aluminum) of suitable type and adequate thickness in relation to the capacity and the intended use of the drum. Minimum thickness and marking requirements in §§173.28(b)(4) and 178.503(a)(9) of this subchapter apply to drums intended for reuse.

(2) All seams must be welded. Chime seams, if any, must be reinforced by the application of separate reinforcing rings.

(3) The body of a drum of a capacity greater than 60 L (16 gallons) may have at least two expanded rolling hoops or two separate rolling hoops. If there are separate rolling hoops, the hoops must be fitted tightly on the body and so secured that they cannot shift. Rolling hoops may not be spot-welded.

(4) Openings for filling, emptying, or venting in the bodies or heads of non-removable head (1N1) drums may not exceed 7.0 cm (3 inches) in diameter. Drums with larger openings are considered to be of the removable head type (1N2). Closures for openings in the bodies and heads of drums must be so designed and applied that they will remain secure and leakproof under normal conditions of transport. Closure flanges may be welded in place so that the weld provides a leakproof seam. Gaskets or other sealing elements must be used with closures unless the closure is inherently leakproof.

**§ 178.507**

(5) Closure devices for removable head drums must be so designed and applied that they remain secure and drums remain leakproof under normal conditions of transport. Gaskets or other sealing elements must be used with all removable heads.

(6) Maximum capacity of drum: 450 L (119 gallons).

(7) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 56 FR 66285, Dec. 20, 1991; Amdt. 178-102, 59 FR 28494, June 2, 1994]

**§ 178.507 Standards for plywood drums.**

(a) The identification code for a plywood drum is 1D.

(b) Construction requirements for plywood drums are as follows:

(1) The wood used must be well-seasoned, commercially dry and free from any defect likely to lessen the effectiveness of the drum for the purpose intended. A material other than plywood, of at least equivalent strength and durability, may be used for the manufacture of the heads.

(2) At least two-ply plywood must be used for the body and at least three-ply plywood for the heads; the plies must be firmly glued together, with their grains crosswise.

(3) The body and heads of the drum and their joints must be of a design appropriate to the capacity of the drum and its intended use.

(4) In order to prevent sifting of the contents, lids must be lined with kraft paper or some other equivalent material which must be securely fastened to the lid and extend to the outside along its full circumference.

(5) Maximum capacity of drum: 250 L (66 gallons).

(6) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended at 57 FR 45465, Oct. 1, 1992]

**§ 178.508 Standards for fiber drums.**

(a) The identification code for a fiber drum is 1G.

(b) Construction requirements for fiber drums are as follows:

(1) The body of the drum must be constructed of multiple plies of heavy paper or fiberboard (without corruga-

**49 CFR Ch. I (10-1-10 Edition)**

tions) firmly glued or laminated together and may include one or more protective layers of bitumen, waxed kraft paper, metal foil, plastic material, or similar materials.

(2) Heads must be of natural wood, fiberboard, metal, plywood, plastics, or other suitable material and may include one or more protective layers of bitumen, waxed kraft paper, metal foil, plastic material, or similar material.

(3) The body and heads of the drum and their joints must be of a design appropriate to the capacity and intended use of the drum.

(4) The assembled packaging must be sufficiently water-resistant so as not to delaminate under normal conditions of transport.

(5) Maximum capacity of drum: 450 L (119 gallons).

(6) Maximum net mass: 400 kg (882 pounds).

[Amdt. 178-97, 55 FR 52717, Dec. 21, 1990, as amended by Amdt. 178-106, 59 FR 67521, Dec. 29, 1994]

**§ 178.509 Standards for plastic drums and jerricans.**

(a) The following are identification codes for plastic drums and jerricans:

(1) 1H1 for a non-removable head plastic drum;

(2) 1H2 for a removable head plastic drum;

(3) 3H1 for a non-removable head jerrican; and

(4) 3H2 for a removable head jerrican.

(b) Construction requirements for plastic drums and jerricans are as follows:

(1) The packaging must be manufactured from suitable plastic material and be of adequate strength in relation to its capacity and intended use. No used material other than production residues or regrind from the same manufacturing process may be used unless approved by the Associate Administrator. The packaging must be adequately resistant to aging and to degradation caused either by the substance contained or by ultra-violet radiation. Any permeation of the substance contained may not constitute a danger under normal conditions of transport.