

§ 171.9

49 CFR Ch. I (10-1-05 Edition)

No. 0170.1 at 2(103).) *Unloading incidental to movement* includes transloading.

Vessel includes every description of watercraft, used or capable of being used as a means of transportation on the water.

Viscous liquid means a liquid material which has a measured viscosity in excess of 2500 centistokes at 25 °C. (77 °F.) when determined in accordance with the procedures specified in ASTM Method D 445-72 “Kinematic Viscosity of Transparent and Opaque Liquids (and the Calculation of Dynamic Viscosity)” or ASTM Method D 1200-70 “Viscosity of Paints, Varnishes, and Lacquers by Ford Viscosity Cup.”

Volatility refers to the relative rate of evaporation of materials to assume the vapor state.

Water reactive material. See §173.124(c) of this subchapter.

Water resistant means having a degree of resistance to permeability by and damage caused by water in liquid form.

Wooden barrel means a packaging made of natural wood, of round cross-section, having convex walls, consisting of staves and heads and fitted with hoops.

W.T. means watertight.

[Amdt. 171-32, 41 FR 15994, Apr. 15, 1976]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §171.8, see the List of CFR Sections Affected which appears in the Finding Aids section of the printed volume and on GPO Access.

§ 171.9 Rules of construction.

(a) In this subchapter, unless the context requires otherwise:

- (1) Words imparting the singular include the plural;
- (2) Words imparting the plural include the singular; and
- (3) Words imparting the masculine gender include the feminine;

(b) In this subchapter, the word: (1) “Shall” is used in an imperative sense;

(2) “Must” is used in an imperative sense;

(3) “Should” is used in a recommendatory sense;

(4) “May” is used in a permissive sense to state authority or permission to do the act described, and the words “no person may * * *” or “a person may not * * *” means that no person is required, authorized, or permitted to do the act described; and

(5) “Includes” is used as a word of inclusion not limitation.

[Amdt. 171-32, 41 FR 15996, Apr. 15, 1976, as amended by Amdt. 171-32A, 41 FR 40630, Sept. 20, 1976; Amdt. 171-121, 58 FR 51528, Oct. 1, 1993]

§ 171.10 Units of measure.

(a) *General.* To ensure compatibility with international transportation standards, most units of measure in this subchapter are expressed using the International System of Units (“SI” or metric). Where SI units appear, they are the regulatory standard. U.S. standard or customary units, which appear in parentheses following the SI units, are for information only and are not intended to be the regulatory standard.

(b) Abbreviations for SI units of measure generally used throughout this subchapter are as shown in paragraph (c) of this section. Customary units shown throughout this subchapter are generally not abbreviated.

(c) *Conversion values.* (1) Conversion values are provided in the following table and are based on values provided in ASTM E 380, “Standard for Metric Practice”.

(2) If an exact conversion is needed, the following conversion table should be used.

TABLE OF CONVERSION FACTORS FOR SI UNITS

Measurement	SI to U.S. standard	U.S. standard to SI
Activity	1 TBq=27 Ci	1 Ci=0.037 TBq
Length	1 cm=0.3937008 in	1 in=2.540000 cm
	1 m=3.280840 ft	1 ft=0.3048000 m
Thickness	1 mm=0.03937008 in	1 in=25.40000 mm
Mass (weight)	1 kg=2.204622 lb	1 lb=0.4535924 kg
	1 g=0.03527397 oz	1 oz=28.34952 g
Pressure	1 kPa=0.1450377 psi	1 psi=6.894757 kPa
	1 Bar=100 kPa=14.504 psi	1 psi=0.06895 Bar
	1 kPa=7.5 mm Hg	

TABLE OF CONVERSION FACTORS FOR SI UNITS—Continued

Measurement	SI to U.S. standard	U.S. standard to SI
Radiation level	1 Sv/hr=100 rem/hr	1 rem/hr=0.01 Sv/hr
Volume (liquid)	1 L=0.2641720 gal	1 gal=3.785412 L
	1 mL=0.03381402 oz	1 oz=29.57353 mL
	1 m ³ =35.31466 ft ³	1 ft ³ =0.02831685 m ³
Density	1 kg/m ³ =0.06242797 lb/ft ³	1 lb/ft ³ =16.01846 kg/m ³
Force	1 Newton = 0.2248 Pound-force	1 Pound-force=4.483 N

Abbreviation for units of measure are as follows:
 Unit of measure and abbreviation:
 (SI): millimeter, mm; centimeter, cm; meter, m; gram, g; kilogram, kg; kiloPascal, kPa; liter, L; milliliter, mL; cubic meter, m³;
 Terabecquerel, TBq; Gigabecquerel, GBq; millisievert, mSv; Newton, N;
 (U.S.): Inch, in; foot, ft; ounce, oz; pound, lb; psig, psi; gallon, gal; cubic feet, ft³; Curie, Ci; millicurie, mCi; millirem, mrem.

[Amdt. 171-111, 56 FR 66159, Dec. 20, 1991, as amended by Amdt. 171-136, 60 FR 49108, Sept. 21, 1995; Amdt. 171-135, 60 FR 50302, Sept. 28, 1995; 66 FR 33335, June 21, 2001; 66 FR 45378, Aug. 28, 2001; 68 FR 75740, Dec. 31, 2003]

§ 171.11 Use of ICAO Technical Instructions.

Notwithstanding the requirements of parts 172 and 173 of this subchapter, a hazardous material may be transported by aircraft, and by motor vehicle either before or after being transported by aircraft, in accordance with the ICAO Technical Instructions (IBR, see § 171.7) if the hazardous material:

- (a) Is packaged, marked, labeled, classified, described and certified on a shipping paper and otherwise in a condition for shipment as required by the ICAO Technical Instructions;
- (b) Is within the quantity limits prescribed for transportation by either passenger-carrying or cargo aircraft, as appropriate, as specified in the ICAO Technical Instructions;
- (c) Is not a forbidden material or package according to §173.21 of this subchapter; is not a forbidden material as designated in Column (3) of the §172.101 Table of this subchapter; and is not forbidden by Column 9(A) of the §172.101 Table of this subchapter when transported on passenger aircraft, or is not forbidden by Column 9(B) of the §172.101 Table of this subchapter when transported by cargo aircraft.
- (d) Fulfills the following additional requirements as applicable:
 - (1) For a material that meets the definition of a hazardous substance as defined in this subchapter, the shipping paper and package markings must conform to the provisions in §§172.203(c) and 172.324, respectively, of this subchapter.

(2) When a hazardous material, which is subject to the requirements of the ICAO Technical Instructions, is also a hazardous waste as defined in this subchapter:

- (i) The word “Waste” must precede the proper shipping name on shipping papers and package markings; and
- (ii) It must comply with §172.205 with respect to the hazardous waste manifests.

(3) When a hazardous material is not subject to the requirements of the ICAO Technical Instructions, it must be transported as required by this subchapter.

(4) When a hazardous material that is regulated by this subchapter for transportation by highway is transported by motor vehicle on a public highway under the provisions of this section, the following requirements apply:

- (i) The motor vehicle must be placarded in accordance with subpart F of part 172 of this subchapter; and
 - (ii) The shipping paper may include an indication that the shipment is being made under the provisions of this section or the letters “ICAO.”
- (5) For air bag inflators, air bag modules, or seat-belt pretensioners, the shipping paper description must conform to the requirements of §173.166(c) of this subchapter.

- (6) For radioactive materials:
- (i) Shipping papers for highway route controlled quantity radioactive materials shipments must meet the requirements of §172.203(d)(10) of this subchapter.
 - (ii) Competent authority certification and any necessary revalidation