

§ 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 m=3.280840 ft	1 in=2.540000 cm 1 ft=0.3048000 m
Thickness	1 mm=0.03937008 in	1 in=25.40000 mm
Mass (weight)	1 kg=2.204622 lb 1 g=0.03527397 oz	1 lb=0.4535924 kg 1 oz=28.34952 g
Pressure	1 kPa=0.1450377 psi 1 Bar=100 kPa=14.504 psi 1 kPa=7.5 mm Hg	1 psi=6.894757 kPa 1 psi=0.06895 Bar
Radiation level	1 Sv/hr=100 rem/hr	1 rem/hr=0.01 Sv/hr
Volume (liquid)	1 L=0.2641720 gal 1 mL=0.03381402 oz 1 m ³ =35.31466 ft ³	1 gal=3.785412 L 1 oz=29.57353 mL 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.

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