[excerpt] http://law.house.gov/uscsrch.htm

-CITE-

15 USC Sec. 205 01/16/96

-EXPCITE-

TITLE 15 - COMMERCE AND TRADE

CHAPTER 6 - WEIGHTS AND MEASURES AND STANDARD TIME

SUBCHAPTER I - WEIGHTS, MEASURES, AND STANDARDS GENERALLY

-HEAD-

Sec. 205. Authorized tables

-STATUTE-

The tables in the schedule annexed shall be recognized in the construction of contracts and in all legal proceedings as establishing, in terms of the weights and measures on June 22, 1874, in use in the United States, the equivalents of the weights and measures expressed therein in terms of the metric system; and the tables may lawfully be used for computing, determining, and expressing in customary weights and measures the weights and measures of the metric system.

-SOURCE-

(R.S. Sec. 3570.)

-MISC1-

MEASURES OF LENGTH

Metric denominations and values

Equivalents in

denominations in use

Myriameter	10,000 meters	6.2137 miles.
Kilometer	1,000 meters	0.62137 mile, or 3,280 feet and 10 inches.
Hectometer	100 meters	328 feet and 1 inch.
Dekameter	10 meters	393.7 inches.
Meter	1 meter	39.37 inches.
Decimeter	1/10 of a meter	3.937 inches
Centimeter	1/100 of a meter	0.3937 inch.
Millimeter	1/1000 of a meter	0.0394 inch.

MEASURES OF CAPACITY

Metric denominations and values

Names

Number of liters

Cubic measure

Equivalents in denominations in use

Dry measure

Liquor or wine measure

Kiloliter, or stere.

--: 1,000

--: 1 cubic meter

--: 1.308 cubic yards.

--: 264.17 gallons.

Hectoliter

--: 100

--: 1/10 of a cubic meter.

--: 2 bushels and 3.35 pecks.

--: 26.417 gallons.

Dekaliter

--: 10

--: 10 cubic decimeters.

--: 9.08 quarts

--: 2.6417 gallons.

Liter

--: 1

--: 1 cubic decimeter.

--: 0.908 quart

--: 1.0567 quarts.

Deciliter

--: 1/10

--: 1/10 of a cubic decimeter.

--: 6.1022 cubic inches.

--: 0.845 gill.

Centiliter

--: 1/100

--: 10 cubic centimeters.

--: 0.6102 cubic inch.

--: 0.338 fluid ounce.

Milliliter

--: 1/1000

--: 1 cubic centimeter.

--: 0.061 cubic inch.

--: 0.27 fluid dram.

MEASURES OF SURFACE

Metric denominations and values

		Equivalents in denominations in use
Hectare	10,000 square meters	2.471 acres.
Are	100 square meters	119.6 square yards.
Centare	1 square meter	1,550 square inches

WEIGHTS

Metric denominations and values

Names	Number of grams	Weight of what quantity of water at maximum density
Millier or tonneau	1,000,000	1 cubic meter :2,204.6 pounds
Quintal	100,000	1 hectoliter :220.46 pounds.
Myriagram	10,000	10 liters :22.046 pounds.
Kilogram or kilo	1,000	1 liter :2.2046 pounds.
Hectogram	100	1 deciliter :3.5274 ounces.

Dekagram	:10	:10 cubic centimeters	:0.3527 ounce.
Gram	:1	:1 cubic centimeter	:15.432 grains.
Decigram	: 1/10	: 1/10 of a cubic centimeter	:1.5432 grains.
Centigram	: 1/100	:10 cubic millimeters	:0.1543 grain.
Milligram	: 1/1000	:1 cubic millimeter	:0.0154 grain

-COD-

CODIFICATION

R.S. Sec. 3570 derived from act July 28, 1866, ch. 301, Sec. 2, 14 Stat. 339, 340.

-MISC3-

U.S. CUSTOMARY SYSTEM OF WEIGHTS AND MEASURES - COMMERCIAL WEIGHTS AND MEASURES UNITS

A notice by the Director of the National Bureau of Standards (now National Institute of Standards and Technology) dated July 15, 1968, and published in the Federal Register (33 F.R. 10755, July 27, 1968), provided that:

By virtue of the authority vested in the Secretary of Commerce by 15 U.S.C. 272 and delegated to the National Bureau of Standards by Department Order 90-A, the Bureau is charged with the responsibility for "The custody, maintenance, and development of the national standards of measurement, * * *." The method employed

for disseminating information on weights and measures units has been through official National Bureau of Standards publications. However, all such units have never been listed together in any Federal legislation or in the Federal Register. On February 27, 1968, in the House Committee on Science and Astronautics Report No. 1107, accompanying H.R. 13058, legislation to repeal the Standard Container Act of August 31, 1916 (39 Stat. 673; 15 U.S.C. 251-256), and the Standard Container Act of May 21, 1928 (45 U.S.C. 685; 15 U.S.C. 257-257i), and amend the Fair Packaging and Labeling Act of November 3, 1966 (80 Stat. 1296; 15 U.S.C. 1451), the following Committee view was expressed:

Testimony revealed that although, standard weights and measures are defined in publications by the Bureau of Standards, these definitions are not defined by law nor have they been published in the Federal Register. Consequently, the Committee recommends that the Secretary of Commerce cause to be published in the Federal Register a listing of the common weights and measures used in normal commerce throughout the United States and relate them to the standards developed in accordance with existing law, 15 U.S.C. 272.

Commercial units of weight and measure in common use are based on the yard and the avoirdupois pound. The yard and avoirdupois pound were last defined in the Federal Register of July 1, 1959, in terms of the national standards of length and mass: The meter and the National Prototype Kilogram. From the two units, the yard and the pound, are derived all other U.S. Customary multiple and submultiple units that will be found in ordinary commerce. They are defined as:

1 yard=0.914 4 meter (FOOTNOTE 1)

(FOOTNOTE 1) Denotes exact figures.

1 pound (avoirdupois)=0.453 592 37 kilogram (FOOTNOTE 1)

LINEAR MEASURE

U.S. CUSTOMARY

12 inches=1 foot=0.304 8 meter (FOOTNOTE 1)

3 feet=1 yard=1.914 4 meter (FOOTNOTE 1)

5,280 feet=1 statute mile=1,609 kilometers

6,076.115 feet=1 International Nautical Mile=1.852 kilometers

(FOOTNOTE 1)

METRIC

10 millimeters=1 centimeter

10 centimeters=1 decimeter

10 decimeters=1 meter

10 meters=1 dekameter

10 dekameters=1 hectometer

10 hectometers=1 kilometer

AREA MEASURE

U.S. CUSTOMARY

144 square inches=1 square foot=.0.092 9 square meter

9 square feet=1 square yard=0.886 1 square meter

43,560 square feet=1 acre=0.404 7 hectare

640 acres=1 square mile=259 hectares

1 square mile=1 section=259 hectares

36 sections=1 township=932 4 hectares

METRIC

100 square millimeters=1 square centimeter

10,000 square centimeters=1 square meter

100 square meters=1 are

100 ares=1 hectare

100 hectares=1 square kilometer

WEIGHT

U.S. CUSTOMARY (AVOIRDUPOIS)

437.5 grains=1 ounce=28.349 5 grams

7,000 grains=1 pound=0.453 592 37 kilogram

16 ounces=1 pound=0.453 592 37 kilogram

2,000 pounds=1 short ton=0.907 2 metric ton

2,240 pounds=1 long ton=1.016 metric tons

METRIC

10 milligrams=1 centigram

10 centigrams=1 decigram

10 decigrams=1 gram

10 grams=1 dekagram

10 dekagrams=1 hectogram

10 hectograms=1 kilogram

1,000 kilograms=1 metric ton

CAPACITY, OR VOLUME, LIQUID MEASURE

U.S. CUSTOMARY

1 gallon=231 cubic inches=3.785 4 liters

4 fluid ounces=1 gill=0.118 3 liter

4 gills=1 pint=0.473 2 liter

2 pints=1 quart=0.946 4 liter

4 quarts=1 gallon=3.785 4 liters

METRIC

10 milliliters=1 centiliter

10 centiliters=1 deciliter

10 deciliters=1 liter

10 liters=1 dekaliter

10 dekaliters=1 hectoliter

10 hectoliters=1 kiloliter

CAPACITY, OR VOLUME, DRY MEASURE

U.S. CUSTOMARY

1 bushel=2,150.42 cubic inches=35.239 1 liters

2 dry pints=1 dry quart=1.101 2 liters

8 dry quarts=1 peck=8.809 8 liters

4 pecks=1 bushel=35.239 1 liters

The accepted volume of a barrel in the United States varies significantly depending both on the commodity for which it is used and on how it is defined in State law (varying from State-to-State).

METRIC

The volumetric units are the same for both liquid and dry measure in the Metric System.

CUBIC MEASURE

U.S. CUSTOMARY

1,728 cubic inches=1 cubic foot=0.028 316 8 cubic meter

27 cubic feet=1 cubic yard=0.764 554 9 cubic meter

METRIC

1,000 cubic millimeters=1 cubic centimeter

1,000 cubic centimeters=1 cubic decimeter

1,000 cubic decimeters=1 cubic meter

SPECIAL UNITS

The unit used for the sale of firewood is the cord of 128 cubic feet.

The unit used for the sale of precious stones is the Metric Carat

of 200 milligrams.

The units used for over-the-counter sales of precious metals in the United States are troy units.

TROY WEIGHT

24 grains=1 pennyweight=1.555 17 grams

20 pennyweights=1 ounce troy=31.103 47 grams

12 ounces troy=1 pound troy=0.373 242 kilogram

The apothecaries system of units, once widely used in the United States for pharmaceutical purposes, is now used only very little. Usage of the Metric System has replaced the apothecaries system at the manufacturing level, and at most of the retail level.

ELECTRICITY AND NATURAL GAS

When a consumer is billed for having used electricity, what has been sold is electrical energy, and that energy is expressed in terms of kilowatt-hours. One kilowatt-hour equals 3,600,000 joules (the joule is the unit of energy in the International System of Units).

Consumption of natural gas normally is expressed in terms of therms. One therm equals 105,480,400 joules.