

# U.S. AND METRIC SYSTEM EQUIVALENTS

## LENGTH EQUIVALENTS

Unit	Millimeters	Centimeters	Inches	Feet	Yards	Meters
1 Millimeter=	1	.1	.03937	.003281	.001094	.001
1 Centimeter=	10	1	.3937	.032808	.010936	.01
1 Inch=	25.4001	2.54001	1	.083333	.027778	.025400
1 Foot=	304.801	30.4801	12	1	.333333	.304801
1 Yard=	914.402	91.4402	36	3	1	.914402
1 Meter=	1000	100	39.37	3.28083	1.09361	1

Unit	Feet	Yards	Meters	Rods	Furlongs	Miles (Statute)
1 Rod=	16.5	5.5	5.02921	1	.025 (1/40)	.003125 (1/320)
1 Furlong=	660	220	201.168	40	1	.125(1/8)
1 Mile (Statute)=	5280	1760	1609.35	320	8	1

1 Nautical Mile = 6080.2 feet = 1.15155 statute miles = 1/3 league.  
1 Light Year = 5.879 trillion miles = 9.46 trillion kilometers.

## WEIGHT EQUIVALENTS

Unit	Grains	Grams	Ounces (Troy)	Ounces (Avoir.)	Pounds (Troy)	Pounds (Avoir.)	Kilo-grams
1 Grain=	1	.064799	.002083	.002286	.000174	.000143	.000065
1 Gram=	15.4324	1	.032151	.035274	.002679	.002205	.001
1 Ounce (Troy)=	480	31.1035	1	1.09714	.083333	.068571	.031104
1 Ounce (Avoir.)=	437.5	28.3495	.911458	1	.075955	.0625	.028350
1 Pound (Troy)=	5760	373.242	12	13.1657	1	.822857	.373242
1 Pound (Avoir.)=	7000	453.592	14.5833	16	1.21528	1	.453592
1 Kilogram =	15432.4	1000	32.1507	35.2740	2.67923	2.20462	1

Unit	Kilograms	Pounds (Troy)	Pounds (Avoir.)	Metric Tons	Net (Short)	Gross (Long)
1 Metric Ton =	1000	2679.23	2204.62	1	1.10231	.984206
1 Net (Short) Ton=	907.185	2430.56	2000	.907185	1	.892857
1 Gross (Long) Ton=	1016.05	2722.22	2240	1.01605	1.12	1

## VOLUME AND CAPACITY EQUIVALENTS

Unit	Cubic CM	Cubic In	Liters	Qts (Liq.)	Qts (Dry)	Gals. (Liq.)	Gals. (Dry)	Cubic Feet
1 Cu. Centimeter=	1	.06102	.001	.00106	.00091	.00026	.00023	.00004
1 Cu. Inch=	16.387	1	.01639	.01732	.01488	.00433	.00372	.00058
1 Gill=	118.29	7.2188	.125	.10742	.03125	.02686	.02686	.00418
1 Pint (Liquid)=	473.18	28.875	.47318	.5	.42968	.125	.10742	.01671
1 Pint (dry)=	550.62	33.600	.55062	.58182	.5	.14546	.125	.01945
1 Liter=	1000	61.023	1	1.0567	.90808	.26417	.22702	.03531
1 Quart (Liquid)=	946.36	57.75	.94636	1	.85937	.25	.21484	.03342
1 Quart (dry)=	1101.2	67.201	1.1012	1.1637	1	.29091	.25	.03889
1 Gallon (Liquid)=	3785.4	231	3.7854	4	3.4375	1	.85937	.13368
1 Gallon (dry)=	4404.9	268.80	4.4049	4.6546	4	1.1636	1	.15556
1 Pack=	8809.8	537.61	8.8098	9.3092	8	2.3273	2	.31111
1 Cu. Foot=	28317.0	1728	28.317	29.922	25.714	7.4805	6.4285	1
1 Bushel=	35239.3	2150.4	35.239	37.237	32	9.3092	8	1.2445
1 Barrel=	119241.2	7276.5	119.24	126	108.28	31.5	27.070	4.2109
1 Cu. Yard=	764559.4	46656	764.56	807.90	694.28	201.97	173.57	27
1 Cu. Meter=	1000000	61023.4	1000	1056.7	908.08	264.17	227.02	35.314

## AREA EQUIVALENTS

Unit	Square Inches	Square Feet	Square Yards	Square Meters
1 Square Foot=	144	1	.1111	.09290
1 Square Yard=	1296	9	1	.83613
1 Square Meter =	1550	10.7639	1.19599	1
1 Square Rod=	39204	272.25	30.25	25.293
1 Are=	155000	1076.39	119.599	100
1 Acre=	6272640	43560	4840	4046.86
1 Square Mile (640 Acres)=	-	27878400	3097600	2589999
1 Square Kilometer=	-	10763867	1195985	1000000

## MISCELLANEOUS LIQUID MEASURE CONVERSIONS

1 Fl. Oz. = 1.805 Cu. In.	1 Quart = 946 Cu. Cm.
1 Fl. Oz. = 29.6 Cu. Cm.	1 Gallon = 8 Pints
1 Pint = 16 Fl. Oz.	1 Gallon = 4 Quarts
1 Quart = 32 Fl. Oz.	1 Firkin = 9 Gallons
1 Quart = 2 Pints	1 Hogshead = 63 Gallons

## METRIC SYSTEM

### LENGTH

1 Meter (m)	=	$\left\{ \begin{array}{l} 10 \text{ decimeters (dm)} \\ 100 \text{ centimeters (cm)} \\ 1,000 \text{ millimeters (mm)} \end{array} \right.$
1 dekameter (dkm)	=	10 meters (m)
1 hectometer (hm)	=	100 meters (m)
1 kilometer (km)	=	1,000 meters (m)

### WEIGHT

1 gram (g)	=	$\left\{ \begin{array}{l} 10 \text{ decigrams (dg)} \\ 100 \text{ centigrams (cg)} \\ 1,000 \text{ milligrams (mg)} \end{array} \right.$
1 dekagram (dkg)	=	10 grams (g)
1 hectogram (hg)	=	100 grams (g)
1 kilogram (kg)	=	1,000 grams (g)

### VOLUME & CAPACITY

1 liter (l)	=	$\left\{ \begin{array}{l} 1 \text{ cubic decimeter (dm}^3\text{)} \\ 10 \text{ deciliters (dl)} \\ 100 \text{ centiliters (cl)} \\ 1,000 \text{ milliliters (ml)} \\ 1,000 \text{ cubic centimeters (cm}^3\text{ or cc)} \end{array} \right.$
1 dekaliter (dkl)	=	10 liters (l)
1 hectoliter (hl)	=	100 liters (l)
1 kiloliter (kl)	=	$\left\{ \begin{array}{l} 1 \text{ cubic meter (m}^3\text{)} \\ 1 \text{ stere (s)} \\ 1,000 \text{ liters (l)} \end{array} \right.$

### AREA

1 centare (ca)	=	$\left\{ \begin{array}{l} 1 \text{ square meter (m}^2\text{)} \\ 100 \text{ square decimeters (dm}^2\text{)} \\ 10,000 \text{ square centimeters (cm}^2\text{)} \\ 1,000,000 \text{ square millimeters (mm}^2\text{)} \end{array} \right.$
1 are (a)	=	$\left\{ \begin{array}{l} 1 \text{ square dekameter (dkm}^2\text{)} \\ 100 \text{ square meters (m}^2\text{)} \end{array} \right.$
1 hectare (ha)	=	$\left\{ \begin{array}{l} 100 \text{ ares (a)} \\ 10,000 \text{ square meters (m}^2\text{)} \end{array} \right.$
1 square kilometer (km <sup>2</sup> )	=	1,000,000 square meters (m <sup>2</sup> )

Other prefixes occasionally used:

- micro—one millionth • myria—10,000 times
- deca—10 times (same as deka) • mega—1,000,000 times

## AN/MS O-RING EQUIVALENTS

The AN6227B, AN6230B and MS28775 O-Rings have the same composition. For use in aircraft hydraulic systems using MIL-H-5606 petroleum base hydraulic fluid.

AN6227B/MS28775 Equivalents AN6230B/MS28775 Equivalents

AN6227B Dash No.	MS28775 Dash No.	Nominal Size			AN6230B Dash No.	MS28775 Dash No.	Nominal Size		
		Width	I.D.	O.D.			Width	I.D.	O.D.
1	6	1/16	1/8	1/4	1	223	1/8	1-5/8	1-7/8
2	7	1/16	5/32	9/32	2	224	1/8	1-3/4	2
3	8	1/16	3/16	5/16	3	225	1/8	1-7/8	2-1/8
4	9	1/16	7/32	11/32	4	226	1/8	2	2-1/4
5	10	1/16	1/4	3/8	5	227	1/8	2-1/8	2-3/8
6	11	1/16	5/16	7/16	6	228	1/8	2-1/4	2-1/2
7	12	1/16	3/8	1/2	7	229	1/8	2-3/8	2-5/8
8	110	3/32	3/8	9/16	8	230	1/8	2-1/2	2-3/4
9	111	3/32	7/16	5/8	9	231	1/8	2-5/8	2-7/8
10	112	3/32	1/2	11/16	10	232	1/8	2-3/4	3
11	113	3/32	9/16	3/4	11	233	1/8	2-7/8	3-1/8
12	114	3/32	5/8	13/16	12	234	1/8	3	3-1/4
13	115	3/32	11/16	7/8	13	235	1/8	3-1/8	3-3/8
14	116	3/32	3/4	15/16	14	236	1/8	3-1/4	3-1/2
15	210	1/8	3/4	1	15	237	1/8	3-3/8	3-5/8
16	211	1/8	13/16	1-1/16	16	238	1/8	3-1/2	3-3/4
17	212	1/8	7/8	1-1/8	17	239	1/8	3-5/8	3-7/8
18	213	1/8	15/16	1-3/16	18	240	1/8	3-3/4	4
19	214	1/8	1	1-1/4	19	241	1/8	3-7/8	4-1/8
20	215	1/8	1-1/16	1-5/16	20	242	1/8	4	4-1/4
21	216	1/8	1-1/8	1-3/8	21	243	1/8	4-1/8	4-3/8
22	217	1/8	1-3/16	1-7/16	22	244	1/8	4-1/4	4-1/2
23	218	1/8	1-1/4	1-1/2	23	245	1/8	4-3/8	4-5/8
24	219	1/8	1-5/16	1-9/16	24	246	1/8	4-1/2	4-3/4
25	220	1/8	1-3/8	1-5/8	25	247	1/8	4-5/8	4-7/8
26	221	1/8	1-7/16	1-11/16					
27	222	1/8	1-1/2	1-3/4					
28	325	3/16	1-1/2	1-7/8					
29	326	3/16	1-5/8	2					
30	327	3/16	1-3/4	2-1/8					

No MS28775 Equivalent for AN6230B-31 and Larger