

TECH-TALK

BULLETIN

Effective 11/12/2013
Supersedes all previous versions

Conversion Charts

This Tech-Talk is a quick reference guide for unit conversions commonly associated with Building Envelope Systems®.

To Convert Length

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
inches	centimeters	2.54
centimeters	inches	0.04
feet	centimeters	30.48
feet	meters	0.3048
centimeters	feet	0.03281
meters	feet	3.2808
mils	microns	25.4
microns	mils	0.04

To Convert Area

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
square feet	square meters (m ²)	0.0929
square meters (m ²)	square feet	10.764

To Convert Volume

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
U.S. gallon	liter	3.785
U.S. gallon	Imp. gallon	0.833
liter	U.S. gallon	0.264
liter	Imp. gallon	0.220
Imp. gallon	U.S. gallon	1.200
Imp. gallon	liter	4.550

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To Convert Area/Volume

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
sq. ft. / U.S. gallon	m ² / liter	0.0245
sq. ft. / U.S. gallon	m ² / Imp. gallon	0.1120
m ² / liter	sq. ft. / U.S. gallon	40.760
m ² / liter	sq. ft. / Imp. gallon	48.930
m ² / Imp. gallon	m ² / liter	0.2197

To Convert Weight

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
pounds	kilograms	0.4536
kilograms	pounds	2.2046

To Convert Pressure

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
p.s.i.	kg/cm ²	0.0703
kg/cm ²	p.s.i.	14.223

Convert Temperature

<u>FROM</u>	<u>TO</u>	<u>CALCULATE</u>
celsius	fahrenheit	°F = °C (9/5) + 32
fahrenheit	celsius	°C = (°F - 32) (5/9)

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Thermal Conductivity

K-value, Thermal Conductivity	Defined by ASTM C168,		
R-value, Thermal Resistance	$\frac{\text{Thickness}}{\text{K-value}}$	or	$\frac{1}{\text{U-value}}$
U-value, Thermal Transmittance	$\frac{1}{\text{R-value}}$	or	$\frac{\text{K-value}}{\text{Thickness}}$

Convert Air Permeance

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
L/s•m ² @ 75 Pa	cfm/ft ² @ 0.3 in w.g.	0.2
cfm/ft ² @ 0.3 in w.g.	L/s•m ² @ 75 Pa	5

Convert Vapor Permeance

<u>FROM</u>	<u>TO</u>	<u>MULTIPLY BY</u>
US Perm	Metric Perm	0.659045
US Perm	ng/s•m ² •Pa (SI unit)	57.2135
ng/s•m ² •Pa	US Perm	0.0174784
ng/s•m ² •Pa	Metric Perm	0.0115191
Metric Perm	US Perm	1.51735
Metric Perm	ng/s•m ² •Pa (SI unit)	86.8127

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Temperature Conversion Chart

°F	°C
-20	-28.9
-10	-23.3
-5	-20.6
0	-17.8
1	-17.2
2	-16.7
3	-16.1
4	-15.6
5	-15.0
6	-14.4
7	-13.9
8	-13.3
9	-12.8
10	-12.2
11	-11.7
12	-11.1
13	-10.6
14	-10.0
15	-9.4
16	-8.9
17	-8.3
18	-7.8
19	-7.2
20	-6.7
21	-6.1
22	-5.6
23	-5.0
24	-4.4
25	-3.9
26	-3.3
27	-2.8
28	-2.2
29	-1.7
30	-1.1

°F	°C
31	-0.6
32	0.0
33	0.6
34	1.1
35	1.7
36	2.2
37	2.8
38	3.3
39	3.9
40	4.4
41	5.0
42	5.6
43	6.1
44	6.7
45	7.2
46	7.8
47	8.3
48	8.9
49	9.4
50	10.0
51	10.6
52	11.1
53	11.7
54	12.2
55	12.8
56	13.3
57	13.9
58	14.4
59	15.0
60	15.6
61	16.1
62	16.7
63	17.2
64	17.8

°F	°C
65	18.3
66	18.9
67	19.4
68	20.0
69	20.6
70	21.1
71	21.7
72	22.2
73	22.8
74	23.3
75	23.9
76	24.4
77	25.0
78	25.6
79	26.1
80	26.7
81	27.2
82	27.8
83	28.3
84	28.9
85	29.4
86	30.0
87	30.6
88	31.1
89	31.7
90	32.2
91	32.8
92	33.3
93	33.9
94	34.4
95	35.0
96	35.6
97	36.1
98	36.7

°F	°C
99	37.2
100	37.8
101	38.3
102	38.9
103	39.4
104	40.0
105	40.6
106	41.1
107	41.7
108	42.2
109	42.8
110	43.3
111	43.9
112	44.4
113	45.0
114	45.6
115	46.1
116	46.7
117	47.2
118	47.8
119	48.3
120	48.9
130	54.4
140	60.0
150	65.6
160	71.1
170	76.7
180	82.2
190	87.8
200	93.3
225	107.2
250	121.1
275	135.0
300	148.9

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Disclaimer

The conversion charts are provided for your personal use. You must verify that the values calculated are accurate and suitable for your application.

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