



Mightylite® Structural Insulation

Properties & Characteristics

Physical Properties	L	M	H	X	S
Density pcf kg/m ³	18 (288)	28 (449)	35 (561)	40 (641)	55 (881)
Maximum Recommended Continuous Service Temperature °F °C	1800 (982)	1800 (982)	1700 (927)	1700 (927)	1700 (927)
Flexural Strength psi kPa	260 (1,793)	550 (3,792)	800 (5,516)	1000 (6,895)	1400 (9,653)
Compressive Strength @ 10% Deformation psi kPa	450 (3,103)	900 (6,206)	1600 (11,032)	2000 (13,790)	4200 (28,959)
Linear Shrinkage After 24 Hours at Temperature, %					
Temp. °F(°C)	1700 (927)	1700 (927)	1200 (649)	1700 (927)	1700 (927)
Length	1.0	0.9	0.5	0.7	0.6
Width	1.0	0.9	0.5	0.8	0.7
Thickness	2.1	2.3	1.0	3.28	3.2
Weight Loss	9.6	9.7	8	9.9	10.4
Temp. °F(°C)	-	-	1400 (760)	-	-
Length	-	-	1.0	-	-
Width	-	-	1.0	-	-
Thickness	-	-	2.5	-	-
Weight Loss	-	-	10	-	-
Temp. °F(°C)	-	-	1600 (871)	-	-
Length	-	-	1.0	-	-
Width	-	-	1.0	-	-
Thickness	-	-	2.5	-	-
Weight Loss	-	-	10	-	-
Temp. °F(°C)	-	-	1800 (982)	-	-
Length	-	-	1.5	-	-
Width	-	-	1.5	-	-
Thickness	-	-	3.5	-	-
Weight Loss	-	-	11	-	-

Refractory Specialties, Inc. 230 West California Ave. Sebring, Ohio 44672

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Physical Properties Thermal Conductivity (K)	L	M	H	X	S
Mean Temp. °F(°C)	200(93)	200(93)	200(93)	200(93)	-
Btu•in/hr•ft ² •°F	.54	.61	.65	.65	-
W/m•°K	0.078	0.088	0.094	0.094	-
Mean Temp. °F(°C)	400(204)	400(204)	400(204)	400(204)	400(204)
Btu•in/hr•ft ² •°F	.61	.66	.70	.70	.97
W/m•°K	0.088	0.095	0.101	0.101	0.140
Mean Temp. °F(°C)	600(316)	600(316)	600(316)	600(316)	600(316)
Btu•in/hr•ft ² •°F	.67	.73	.75	.75	.99
W/m•°K	0.097	0.105	0.108	0.108	0.143
Mean Temp. °F(°C)	800(427)	800(427)	800(427)	800(427)	800(427)
Btu•in/hr•ft ² •°F	.73	.80	.80	.80	1.05
W/m•°K	0.105	0.115	0.115	0.115	0.151

*Standard Thickness *(Other thicknesses available upon request.)

- L ¾", 1", 1½", 2", 2½", 3" (19, 25, 38, 51, 64, 76 mm)
- M ½", ¾", 1", 1½", 2", 2½", 3" (13, 19, 25, 38, 51, 64, 76 mm)
- H ½", ¾", 1", 1½" (13, 19, 25, 38 mm)
- X ½", ¾", 1", 1½", 2" (13, 19, 25, 38, 51 mm)
- S ½", ¾", 1", 1½", 2" (13, 19, 25, 38, 51 mm)

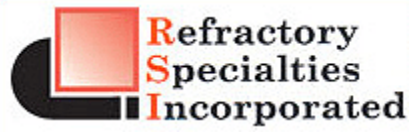
X			
Consolidation Under Load (in/in)			
Pressure	kPa	Deflection Under Load	Permanent Consolidation
psi			
200	1,379	0.008	0.002
500	3,448	0.014	0.002
1000	6,895	0.022	0.003
2000	13,790	0.059	0.005
3000	20,685	0.120	0.057
4000	27,580	0.243	0.164
5000	34,475	0.325	0.248
6000	41,370	0.364	0.287
7000	48,265	0.412	0.337

S
Compressive Strength After Exposure To Soaking Head for 24 Hours:

Pressure		300°F (149°C)		400°F (204°C)		600°F (316°C)		800°F (427°C)		1000°F (538°C)	
psi	kPa	DF	PC	DF	PC	DF	PC	DF	PC	DF	PC
500	3,448	0.008	0.000	0.008	0.001	0.052	0.001	0.050	0.002	0.056	0.002
1000	6,895	0.012	0.000	0.013	0.001	0.056	0.002	0.050	0.002	0.060	0.002
2000	13,790	0.017	0.001	0.017	0.002	0.062	0.002	0.053	0.002	0.066	0.002
3000	20,685	0.022	0.001	0.019	0.002	0.066	0.002	0.068	0.003	0.072	0.004
4000	27,580	0.028	0.001	0.022	0.002	0.076	0.002	0.076	0.004	0.079	0.005
5000	34,475	0.030	0.001	0.027	0.004	0.076	0.003	0.086	0.006	0.100	0.010
6000	41,370	0.044	0.002	0.037	0.004	0.082	0.014	0.099	0.011	0.125	0.014

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DF=Deformation Under Load, inches. To convert inches to millimeters in above table, multiply by 25.4
PC=Permanent Consolidation, inches. To convert inches to millimeters in above table, multiply by 25.4.

Standard Sizes

Sheet size 4'x4' (1.22 m x 1.22 m)

Dimensional Tolerances Length and Width 1/8" (3 mm)

Thickness 1/32" (0.8 mm)

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