Johns Manville
Industrial Insulation Group

Super Firetemp® M

High-Temperature Insulation

PRODUCT DATA SHEET

Super Firetemp M

Super Firetemp M is an inorganic, non-combustible, high-temperature insulation for use in fire protection systems. It can be used in systems operating up to 1800°F (982°C). Composed primarily of lime, silica and reinforcing fibers. This product is white, essentially dust-free, contains no asbestos, mercury or lead, and meets or exceeds ASTM C656, Type II Grade 6.

THE ADVANTAGES

- Assured Fire Resistance
- Durable
- Economical

APPLICATIONS

Since Super Firetemp M possesses both exceptional strength and insulation qualities, it can be readily machined into component parts of many sizes and shapes. Uses include fire-rated enclosures around structural steel, fire-rated walls, pipe supports, high temperature oven and refractory backup.

AVAILABLE FORMS AND SIZES

Thickness ..... ½", ¾", 1", 1½", 2", 2½", 3"
..... (13,19, 25, 38, 51, 64, 76 mm)
Sheet Size ..... 4' x 8' (1.22m x 2.44m)

Super Firetemp M is available with a sanded finish on one or both sides. The sanded surfaces are smooth and easy to machine.

DIMENSION TOLERANCES

Length and Width ..... +/- 1/8" (3.2 mm)
Thickness ..... +/- 1/8" (3.2 mm) Sanded One Side
..... +/- 1/16" (1.6 mm) Sanded Two Sides

LINEAR SHRINKAGE AFTER 24 HOURS AT TEMPERATURE, %

Temperature °F (°C)	Length	Width	Thickness	Weight Loss
1700°F (927°C)	0.9%	0.9%	<2.0%	9.7%

THERMAL CONDUCTIVITY

Mean Temperature		"k"	
°F	°C	Btu • in/(hr • ft² • °F)	W/m • °K
200	93	0.61	0.088
400	204	0.66	0.095
600	316	0.73	0.105
800	427	0.80	0.115

SUPER FIRETEMP M®
OPERATING TEMPERATURE LIMIT: 1800°F (982°C)

SPECIFICATION COMPLIANCE

ASTM C656	Type II, Grade 6
ASTM C795 Corrosion: Austenitic Stainless Steel	Passes
ASTM E72 Panel Strength	Passes
ASTM E84 Surface Burning Characteristics	Flame Spread -0 Smoke Developed -0
ASTM E119 Building Fire Test	1-2 Hours
ASTM E119 Structural Fire Test	1-4 Hours (see chart)
ASTM E136 Non-Combustible	Passes
ASTM E814 Penetration Fire Stop	1-2 Hours
UL 263 Fire Testing	1-2 Hours
UL 1479 Penetration Fire Stop	1-2 Hours
UL 1709 Rapid Fire Test	1-4 Hours (see chart)
NFPA 251 Fire Testing	1-2 Hours
Underwriters Laboratories, Inc. Design Numbers	U446, U447, X307, XR301
Underwriters Laboratories Canada Design Numbers	Z200, Z202
R-Value @ 75°F	1.7 per inch of thickness
Density (Avg.)	28 pcf (449 kg/m³)
Maximum Recommended Continuous Service Temp.	1800°F (982°C)
Flexural Strength (Avg.)	550 psi (3792 kPa)
Compressive Strength @10% deformation (Avg.)	900 psi (6206 kPa)
Moisture Content, Normal % of Dry Weight (Avg.)	4%

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TYPICAL RATINGS FOR SUPER FIRETEMP M

Use this table to estimate the thickness of Super Firetemp M. The table represents the most common applications. More specific information is available from Industrial Insulation Group. For Structural Steel fire protection, use Super Firetemp L unless the product is going to be exposed to physical abuse such as warehouses, then use Super Firetemp M.

CODE COMPLIANCE

Super Firetemp M undergoes stringent tests to comply with some of the toughest fire codes in the US and Canada.

ISO 9000 CERTIFICATION

Super Firetemp M is manufactured under an ISO 9001:2000 registered quality system. This registration, along with regular independent third-party auditing for compliance, is your assurance that all our products deliver consistently high quality.

PRODUCT CERTIFICATION

When ordering material to comply with any government specification or any other listed specification, a statement of that fact must appear on the purchase order. Government regulations and other listed specifications require specific lot testing, and prohibit the certification of compliance after shipment has been made. There may be additional charges associated with specification compliance testing. Please refer to IND-CSP-3 for Certification Procedures and Charges. Call customer service for more information.

UL X307 - ASTM E119 STRUCTURAL FIRE TEST

Rating Hour	Minimum Column Size	Minimum Thickness (in)
1½ hr	TS4x4x0.188	1½″
2 hr	TS8x8x0.25	1½″
2 hr	W4x13	1½″
3 hr	W4x13	2½″
3 hr	W10x49	2″
3 hr	W14x228	¾″
4 hr	W14x228	1″

UL XR301 - UL 1709 UL 1709 Rapid Rise Fire Test

		Minimum Thickness (in)			
Column Size	W/D	1 hr	2 hr	3 hr	4 hr
TS4x4x0.188	0.59	1½″	2½″	-	-
TS8x8x0.25	0.81	1″	2″	3″	-
W6x16	0.77	1″	2″	3″	-
W8x28	0.96	1″	2″	2½″	-
W10x49	1.23	3/4″	1½″	2″	3″
W12x106	2.11	3/4″	1″	1½″	2″
W14x233	3.65	3/4″	3/4″	3/4″	1″

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Technical specifications as shown in this literature are intended to be used as general guidelines only. Please refer to the Safety Data Sheet and product label prior to using this product. The physical and chemical properties of the Super Firetemp M listed herein represent typical, average values obtained in accordance with accepted test methods and are subject to normal manufacturing variations. They are supplied as a technical service and are subject to change without notice. Any references to numerical flame spread or smoke developed ratings are not intended to reflect hazards presented by these or any other materials under actual fire conditions. Check with the Regional Sales Office nearest you for current information.

All Johns Manville products are sold subject to Johns Manville's standard Terms and Conditions, which includes a Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville standard Terms and Conditions or for information on other Johns Manville thermal insulation and systems, visit www2.jm.com/terms-conditions or call (800)654-3103.