



Johns Manville

Fire Protection Systems

Super Firetemp™

High Temperature Insulation

A Major Advance in Structural Fireproofing

- Grease Ducts
- Electrical Cable Trays
- Electrical Conduit
- Interior Walls
- Structural Steel Columns



Fireproofing Systems

Super Firetemp Withstands 2000°F

Description

Super Firetemp is a noncombustible, asbestos-free fireproofing board used in assemblies requiring one to four hour fire ratings, and is capable of withstanding temperatures in excess of 2000°F (1093°C).

Applications

Recommended for use on columns, beams, grease ducts, vessels, skirts, saddles, tanks, walls, air and exhaust ducts, cable trays, chimneys, refractory backups, and other applications that require fire ratings or high-temperature insulations.

Features

- Uniformly thick with fire rating consistent over every square inch of covered surface.
- Contains no asbestos.
- Continuous service to 1800°F (982°C).

Composition

Composed of hydrous calcium silicate, the product features a xonotlite crystal structure with low water of hydration, resulting in exceptional strength and stability under fire conditions in excess of 2000°F (1093°C). White in color, Super Firetemp is available in 4' x 8' (1.22 m x 2.44 m) panels of various densities and finish-sanded up to 3" (76 mm) thick.

Advantages

Assured Fire Resistance. Specified fire ratings are achieved by testing in

accordance to ASTM, UL and ICBO test standards. Fire-rated assemblies are UL listed. The desired fire rating determines product thickness.

Durable. Super Firetemp is hard, solid, and an abrasive-resistant material with excellent physical properties. The material will neither chip nor flake.

Clean. Super Firetemp is nailed or screwed in place, not blown on. No protective curtains are required.

Easy to Install. Super Firetemp is easily handled and requires no special tools. The product cuts with a circular saw or a saber saw and is field installed using a power screwdriver and drywall screws or hammer and nails with an automatic nailer.

Attractive. The product's sanded surface readily accepts paints, wall coverings and veneers.

All-Weather. Contact the Johns Manville Zone Sales Office nearest you for proper weather protection for outdoor use.

Economical. Super Firetemp simplifies on-site labor and can greatly reduce overall job costs. Product preparation and application are easy; no special tools are required, and clean up is minimal.

Accessories

Super Calstik™ is a high-temperature adhesive designed to bond porous insulating materials. Super Calstik is used to finish all Super Firetemp joints and seams.

Physical Properties

Property*	Super Firetemp L	Super Firetemp M	Super Firetemp EC
Board Size, $\pm \frac{1}{8}$ " (± 3 mm)	4' x 8' (1.22 m x 2.44 m)	4' x 8' (1.22 m x 2.44 m)	3' (0.92 m) Length for Pipe ^A 1' x 3' (0.31 m x 0.92 m) Board Size
Thickness, in. (mm)	$\frac{3}{8}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3** (19, 25, 38, 51, 64, 76)	$\frac{1}{2}$, $\frac{3}{8}$, 1, $1\frac{1}{2}$, 2, $2\frac{1}{2}$, 3** (13, 19, 25, 38, 51, 64, 76)	3 (76)
Density,pcf (kg/m ³)	18 (288)	28 (449)	15 (240)
Compressive Strength @ 10% Deformation, psi (kPa)	450 (3,103)	900 (6,206)	160 (1,103)
Flexural Strength, psi (kPa)	260 (1,793)	550 (3,792)	70 (483)
Screw-Holding Strength, lb. (kg)	36 (16)	70 (32)	—
Dielectric Strength, volts/in. (volts/mm)		30,000-60,000 (1,181-2,362)	—
Linear Shrinkage, % 24-Hour Heat Soak @ 1800°F (982°C)	<2	<2	—
Maximum Continuous Service Temperature, °F (°C)	1,800 (982)	1,800 (982)	650 (343)
R-Value per in. (mm), @ 75°F (24°C) Mean Temperature	1.8 (0.32)	1.7 (0.30)	2.2 (0.39)

^A Manufactured for $\frac{1}{2}$ " to 4" (13 mm to 102 mm) conduit.

Thermal Conductivity ("k")

Mean Temperature °F °C	"k" Btu•in/ (hr • ft ² • °F) W/m • °K	"k" Btu•in/ (hr • ft ² • °F) W/m • °K	"k" Btu•in/ (hr • ft ² • °F) W/m • °K
200 93	.54 0.078	.61 0.088	.43 0.062
400 204	.61 0.088	.66 0.095	.51 0.074
600 316	.67 0.097	.73 0.105	.61 0.088
800 427	.73 0.105	.80 0.115	— —

* Typical average values derived in accordance with accepted test methods subject to normal manufacturing and experimental tolerances.

** Other thicknesses available on request.

Super Firetemp EC

Super Firetemp EC is an inorganic, incombustible material. Chemically, it is manufactured by a patented process and is made from a mineral that results in exceptional strength and extremely low water of hydration. Super Firetemp EC is composed primarily of lime, silica and reinforcing fibers. The product is white, non-toxic and contains no asbestos.

Since Firetemp EC possesses good strength as well as exceptional insulation qualities, it can be readily machined into component parts of many sizes and shapes.

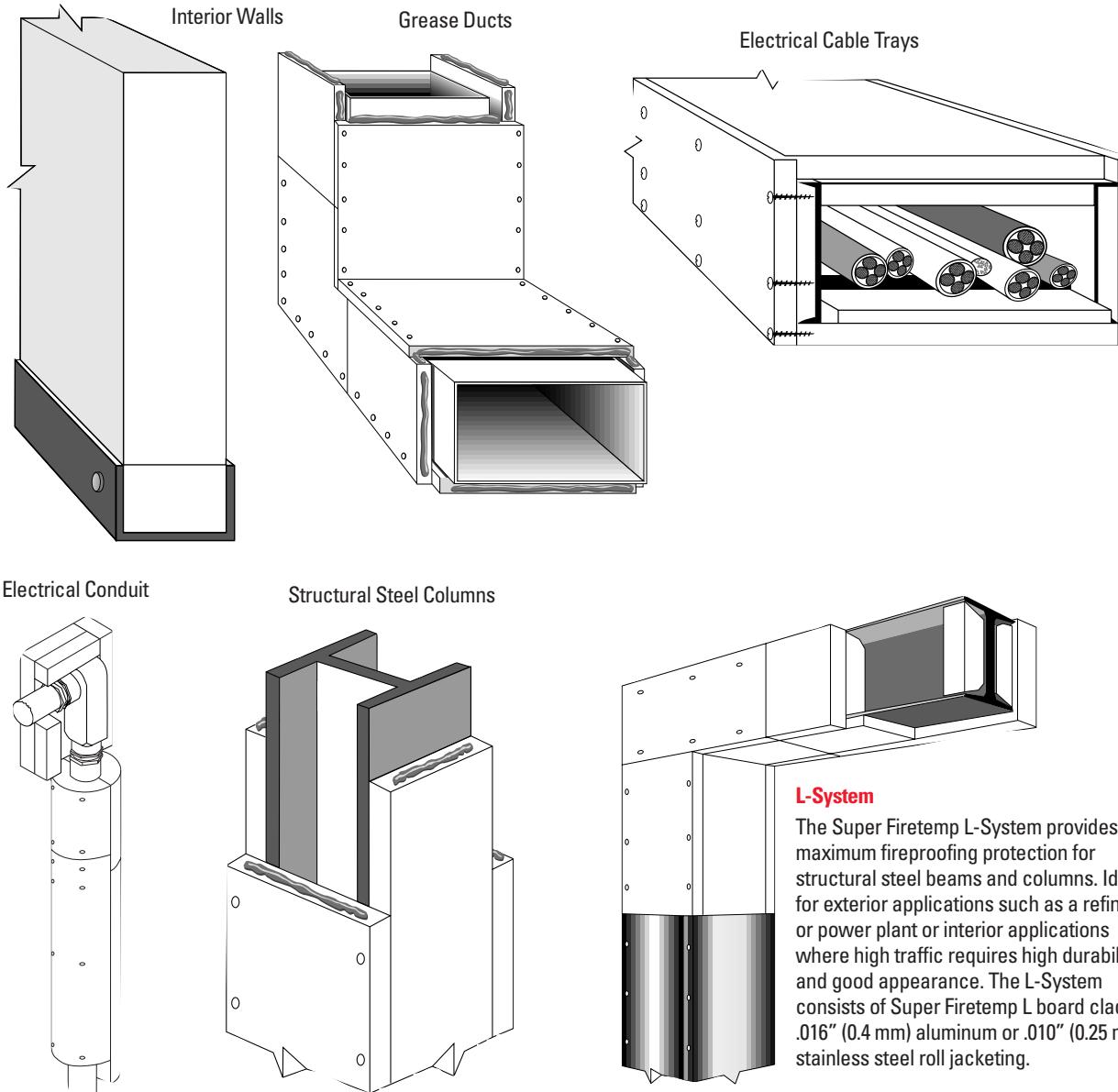
Applications

Only available in 3" (76 mm) thickness and 36" (914 mm) length, Super Firetemp EC is used to provide a one hour fire resistance rating for $\frac{1}{2}$ " to 4" (13 mm to 102 mm) electrical conduit. It can be used indoors or outdoors with an approved weather protection system, and is approved for EMT and rigid conduit.

Super Firetemp EC is UL classified for a one hour fire resistance rating for electrical circuits.

Fireproofing Applications

Super Firetemp allows zero clearance to combustibles. Here are some of its more common applications. Contact Johns Manville for complete application data for your specific requirements.



L-System

The Super Firetemp L-System provides maximum fireproofing protection for structural steel beams and columns. Ideal for exterior applications such as a refinery or power plant or interior applications where high traffic requires high durability and good appearance. The L-System consists of Super Firetemp L board clad in .016" (0.4 mm) aluminum or .010" (0.25 mm) stainless steel roll jacketing.

Super Firetemp™

High Temperature Insulation

Specification Compliance	Super Firetemp L and M		Super Firetemp EC	
Council of American Building Officials (ICBO, BOCA, SBCCI); Report #NER-332*				
ASTM	E 72	Passes	E 84	0 Smoke, 0 Flame
	E 84	0 Smoke, 0 Flame	E 136	Passes
	E 119	1, 2, 3, 4 Hours	E 1725	1 Hour
	E 136	Passes	C 795	Passes
	E 814	3 Hours		
	C 656	Type II, Grade 5 and 6		
	C 795	Passes		
UL	263	1, 2, 3, 4 Hours		
	1479	3 Hours		
	1709	1, 2, 3, 4 Hours		
UBC	2309	(2 in. [51 mm] min. thickness of Super Firetemp M)		
U.S. Coast Guard	164.009, 164.008	—	164.009, 164.008	—
Underwriters Laboratories, Inc.	X307	U446		
Design Numbers	XR301	U447		
	U328	YYET		
UL Canada Design Numbers/	W420	Z200		
Approvals Grease Ducts	W421	Z202		
	W422			
Farmers Home Administration		Acceptance		
Mine Safety and Health Administration		Approved		
National Electrical Code		—	1 Hour Protection for Electrical Circuits	

* See National Evaluation Service Report No. NER-332 for allowable values and/or conditions of use concerning the materials presented in this document which is subject to re-examination, revisions, and possible cancellation. NER-332 was issued by the Council of American Building Officials in cooperation with the ICBO, BOCA, and SBCCI. This report covers the use of Super Firetemp board on kitchen exhaust ducts to provide zero-clearance designs, as well as structural steel protection from one to four hours.

Super Firetemp also meets the requirements of NFPA 96 when installed according to the manufacturer's installation instructions.

Code Compliance

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



Note: For technical information and assistance regarding application information, code approvals, and performance specifications, call **1-800-872-0338**. If this piece is more than one year old, please contact Johns Manville for the current information.

For Order Placement

1110 16 Road	International
Fruita, CO 81521	Denver, Colorado
(970) 525-4226	USA
(800) 525-4226	(303) 978-2980
Fax: (970) 858-9641	Fax: (303) 978-4661



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The physical and chemical properties of Super Firetemp™ 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 Sales Office nearest you for current information. **All Johns Manville products are sold subject to Johns Manville's Limited Warranty and Limitation of Remedy. For a copy of the Johns Manville Limited Warranty and Limitation of Remedy, call the 800 number below.** For information on other Johns Manville thermal insulations and systems, call **1-800-654-3103**. To access automated fax-on-demand service in the United States and Canada, simply call **1-888-INSULFX** (1-888-467-8539) from a fax or phone.