THERMAFIBER® FIRESPAN® MINERAL WOOL INSULATION

Thermafiber® FireSpan® mineral wool insulation products are designed to provide enhanced fire protection in curtain wall and perimeter fire containment systems as well as enhanced performance in thermal and acoustical applications. Thermafiber® FireSpan® is available in 4.0 pcf, 8.0 pcf, and 12.0 pcf nominal densities for specific application needs. These products are noncombustible, moisture-resistant, noncorrosive, nondeteriorating, mildew-resistant, and vermin-resistant. Its natural color provides shadowing in glass spandrels. FireSpan® insulations provide thermal insulation, fire containment, enhanced acoustical performance, and vapor control in many different UL® and Intertek® listed fire containment assemblies of 1-, 2-, and 3-hour ratings.[1]

1 See individual listings for hourly F ratings.

Features

- Available in 4.0 pcf, 8.0 pcf, and 12.0 pcf nominal densities for specific application needs
- Exceptional performance in Perimeter Fire Containment Systems
- Provides fire containment in rated assemblies
- Fire-resistant to temperatures above 2,000°F (1,093°C)[2]
- Can be easily fabricated to fit around various types of curtain wall anchors
- Helps conserve energy, reduce greenhouse gas emissions
- Mold-resistant
- Enhances acoustical performance
- Natural color provides shadowing in glass spandrels
- More robust foil-facing provides additional durability on the job site or during transit
- Minimum 70% recycled content[3]
- Contributes to credits in several green building programs, such as LEED® and Green Globes®

2 As tested to ASTM E119 Time Temperature Curve within ASTM E2307.

Standards, Code Compliance

- ASTM C612
  - FireSpan® 40 Types IA, IB, II, III, IVA
  - FireSpan® 90 Types IA, IB, II, III, IVA, IVB
  - FireSpan® 120 Types IA, IB, II, III, IVA, IVB

Physical Properties

PROPERTY	TEST METHOD	VALUE
Corrosion of Steel, Aluminum, and Copper	ASTM C665	Non-corrosive, Types I, III (Class A, Category 1)
Non-Combustibility	ASTM E136	Non-combustible
Non-Combustibility	CAN/ULC S114	Complies
Water Vapor Permeance	ASTM E96	Unfaced FireSpan®, Permeable Foil-Faced FireSpan®, Impermeable
Water Vapor Sorption	ASTM C1104	Sorption less than 1% by volume
Linear Shrinkage	ASTM C356	<2% @1,200°F (650°C)
Surface Burning Characteristics	ASTM E84	Unfaced, Flame Spread 0, Smoke Developed 0 Faced, Flame Spread 25, Smoke Developed 0
Surface Burning Characteristics	CAN/ULC S102	Unfaced, Flame Spread 0, Smoke Developed 0 Faced, Flame Spread 25, Smoke Developed 0
Fungi Resistance	ASTM C1338	Complies
Perimeter Fire Containment Systems	ASTM E2307	Safing insulation used in conjunction with Thermafiber® FireSpan® insulations and with an approved fill, void, or cavity material sealant in the Perimeter Fire Containment System Complies
Fire Tests of Firestop Systems	CAN/ULC S115	Complies

Curtain wall products are approved by New York City Board of Standards & Appeals – (under BSA 214-73-SM & accepted by MEA-209-82-M, Vol. II). Also, MEA-189-93-M and MEA-190-93-M.

Technical Data

	NOMINAL DENSITY	TESTED TO ASTM C518	
		"K" @ 75° [24°C] BTU.IN/HR.SQ FT. °F	"R" VALUE PER INCH OF THICKNESS[4]
FireSpan® 40	4.0 pcf	0.23	4.3
FireSpan® 90	8.0 pcf	0.23	4.3
FireSpan® 120	12.0 pcf	0.24	4.1

4 R = thickness divided by "k."

Perimeter Fire Containment Tests per ASTM E2307

FireSpan® insulation is the insulation for perimeter fire containment. Thermafiber, Inc. has performed decades of testing in all of the fire containment systems listed below.

- Aluminum Spandrel
- Steel Stud-Framed/Gypsum Sheathing
- Glass Spandrel
- Granite Spandrel
- Precast Concrete
- Steel Back Pan
- Zero Spandrel

For more complete test information, see UL® and Intertek® directories. For a full listing of fire containment systems, visit www.thermafiber.com and click on Fire Rated Assemblies.

For additional job-specific details and accessory materials necessary to complete the perimeter fire containment system, please refer to UL® and Intertek® design listings.[5,6]

See Owens Corning publication "Enclosure Solutions Perimeter Fire Containment System E2307 Curtain Wall Technical Bulletin" for more information.

See Owens Corning publication "Enclosure Solutions Zero Spandrel Perimeter Fire Containment System Technical Bulletin" for more information.

See Owens Corning publication "Thermafiber® Perimeter Fire Containment System Guide" for more information.

5 UL Fire Rated Designs, UL 333 Pfingsten Road, Northbrook, IL 60062.
6 Intertek Laboratories Designs, Fire Resistance Directory, Intertek 16015 Shady Falls Rd. Elmendorf, TX 78112.

Availability

Code compliant perimeter fire containment systems require FireSpan® 90 at a minimum of 2" or greater and/or FireSpan® 40 at 4" or greater and will have a UL® certification. However, each UL® or Intertek® listing requires a specific thickness. Refer to the design listing for correct thickness. Lesser thicknesses, respectively, should be used for thermal or acoustical applications **and will not have a certification.**

PRODUCT	AVAILABLE THICKNESS IN ½" INCREMENTS	STANDARD DIMENSIONS[7,8]			
FireSpan® 40	2"–7"	24" x 48"	24" x 60"	36" x 60"	
FireSpan® 90	1"–7"	24" x 48"	24" x 60"	36" x 60"	48" x 72"
FireSpan® 120	3"	24" x 60"	36" x 60"	48" x 72"	
Tolerances	+¼", -⅛"	Width: ±⅛", Length ±¼"			

7 See our product guide for more details.
8 Custom sizes are available upon request.

Product Options

- FireSpan® 40, 2-inch or greater thickness, is available with a vapor-retarding foil-facing.
- FireSpan® 90, 1-inch[9] or greater thickness, is available with a vapor-retarding foil-facing.
- FireSpan® 120, 3-inch thickness, is available with a vapor-retarding foil-facing.
- Recycled Content Options[3]:
  - Standard Fiber.....70%

FireSpan® FF formaldehyde-free product is available. See Owens Corning publication "Thermafiber® FireSpan® Formaldehyde-Free Mineral Wool Insulation Data Sheet" for more information.

9 Substitution of 2" thick FireSpan® 90 mullion covers with 1" thick FireSpan® 90 mullion covers will require an engineering judgment from the Thermafiber Insolutions® Team.

Installation

FireSpan® products should be mechanically attached to horizontal and vertical mullions based on mechanical fastener requirements per UL/Intertek tested and listed system. Reinforce FireSpan® insulation on the outer insulation surface at the safing line. Typical reinforcement members include hat channels, "L" angles, and "T" bars. Thermafiber Inc.'s patented Impasse® system is designed to quickly and easily mechanically attach FireSpan® insulation to curtain wall systems.

Thermafiber Insolutions®

Thermafiber Insolutions® offers industry-leading technical and engineering assistance to architects, specifiers, and contractors. These services include CAD drawings, engineering judgments, LEED® credit information, and product recommendations. Contact our technical services department at 1-888-834-2371 or email ThermafiberInsolutions@owenscorning.com.

Environmental and Sustainability

Owens Corning is a worldwide leader in building material systems, insulation, and composite solutions, delivering a broad range of high-quality products and services. Owens Corning is committed to driving sustainability by delivering solutions, transforming markets, and enhancing lives. More information can be found at www.owenscorning.com.

Certifications and Sustainable Features

- [3]Verified by ICC-ES to contain a minimum of 70% recycled content. See ICC-ES Evaluation Report VAR-1025 at icc-es.org.
- Environmental Product Declaration (EPD) has been certified by UL Environment. For more information, visit ul.com/epd.
- FireSpan® products have a published Health Product Declaration (HPD).
- FireSpan® 40 & 90 receive SAFETY Act designation by the U.S. Department of Homeland Security. For more information, visit safetyact.gov.

Note: UL® certification for FireSpan® 40 & 90 only.

Notes
For additional information, refer to the Safe Use Instruction Sheet (SUIS) found in the SDS Database via http://sds.owenscorning.com.

THERMAFIBER, INC.
ONE OWENS CORNING PARKWAY
TOLEDO, OH 43659 USA

888-TFIBER1 [834-2371]
www.owenscorning.com/thermafiber

Pub. No. 10021129-H. Printed in U.S.A. May 2023.