



THERMAFIBER® FIRESpan™ 90 and FIRESpan™ 40 Insulations

UL- and OPL-labeled* blankets with highly effective fire and smoke resistant qualities for tested curtain wall assemblies.

- Provides 1, 2, and 3-hr. fire protection in a variety of rated exterior curtain wall assemblies per ASTM E 2307.
- Available in unfaced felt (plain) or with a tough scrim-reinforced foil facing (FSP) that serves as a vapor retarder.
- Optional dark-colored insulation for backing glass spandrel panels.
- Two products, FIRESpan™ 90 and FIRESpan™ 40, provide for a variety of fire-protection applications.
- Products are especially designed for UL and OPL (Intertek) Listed Design fire-containment-rated assemblies.
- FIRESpan Insulations are designed for use in Thermafiber's patent pending IMPASSE™ Curtain Wall Insulation System

Description

THERMAFIBER FIRESpan 90 and FIRESpan 40 Insulations are mineral-wool-type insulations that resist temperatures above 2,000 °F (1,093 °C), thus offering superior fire protection in rated curtain wall assemblies. They are UL and OPL (Intertek) labeled products especially intended for tested UL and OPL (Intertek) designs.

These products are noncombustible per NFPA Standard 220 when tested in accordance with ASTM E 136, and are moisture-resistant, noncorrosive, nondeteriorating, mildew-proof and vermin-proof. They permit dry construction for all-year-round work. Also, these products are available plain or faced with FSP (scrim-reinforced foil) that serves as a vapor retarder, and in standard color or dark color blankets for backing glass spandrel panels. Opposite side from foil facing can be faced with a white or black mat. Two different products permit THERMAFIBER FIRESpan Curtain Wall Insulations to be used in many different fire-containment assemblies of 1, 2, and 3-hr. ratings.

Fire Containment

The first priority in building safety is containment of both fire and smoke to the room of origin. For mid- and high-rise buildings, fire and smoke must be prevented from spreading to the above floor. Since the floor assembly is typically a fire-rated system, a possible route for the fire spread is through and up the exterior curtain wall system. THERMAFIBER Life-Safety Fire Containment Systems are assemblies designed to protect perimeter walls by combining THERMAFIBER Safing Insulation, THERMAFIBER FIRESpan Insulation, THERMAFIBER SMOKE SEAL™ Compound, FIRECODE® Compound or other approved smoke sealants. All model building codes (IBC, BOCA, SBCCI, ICBO, NFPA 5000) require that the gap at the slab edge/curtain wall interface be treated to maintain the same fire integrity rating as the floor-ceiling assembly. THERMAFIBER Life-Safety Fire Containment Systems have been tested in many UL and OPL (Intertek) listed systems and are accepted or recognized (ICC ER-2331, California State Fire Marshal, OSHPD) as maintaining fire containment from floor to floor.

Installation (Aluminum-Framed and Steel-Stud Framed Applications)

Mechanically attach FIRESpan Insulation to vertical aluminum mullions with suitable mechanical fasteners approved by the architect. Adhesive attachments are not acceptable for fire containment systems. Cover aluminum mullions with 1" or 2" thick, 6", 8" or 12" wide THERMAFIBER FIRESpan Insulation depending on the assembly specifications. Place backing/reinforcement members horizontally at the safing line and behind the outer surface of the curtain wall insulation to prevent bowing of the FIRESpan Insulation due to pressure applied from compression-fit Safing Insulation. Typical reinforcement members include hat channels, "L" angles, and "T" bars.

Install THERMAFIBER Safing Insulation, of proper width (2" to 8" max. opening), in safe-off area (foil side up, if required) between THERMAFIBER FIRESpan Insulation and floor slab, on safing clips (if required) spaced as required, 24" or 12" o.c. maximum, leaving no voids. Install safing wider than opening to ensure compression fit. Install proper smoke sealant material, such as THERMAFIBER SMOKE SEAL Compound, FIRECODE Compound or other approved smoke sealant, as indicated in the specific test description or architectural specification.

In steel-stud-framed applications, screw-attach type X gypsum sheathing or cement board, 1/2" or 5/8" thick, to the exterior face of the studs. Friction-fit FIRESpan 40 Insulation between steel studs.

Technical Data

Surface Burning Characteristics (According to ASTM E 84)

Product Designation

FIRESpan 90/FIRESpan 40 Regular (Unfaced)
FIRESpan 90/FIRESpan 40 Foil-Faced

Flame Spread

0
25

Smoke Developed

0
0

Products have a Class A interior finish rating per NFPA 101, Life Safety Code. Values apply to both standard color and dark curtain wall insulation.

Thermal Conductivity and Thermal Resistance (According to ASTM C 518)

Product Designation

FIRESpan 40
FIRESpan 90

Nominal Density⁽¹⁾

4.0 pcf
8.0 pcf

"k" @ 75 °F (24 °C) BTU · in./hr. · sq. ft. · °F

0.24
0.24

"R"⁽²⁾ value for insulation only

"R" = 4.2 per inch of thickness.
"R" = 4.2 per inch of thickness.

(1) Nominal Density per ASTM C 612
(2) R = thickness divided by "k".

Product Data**Standards Compliance**

THERMAFIBER FIRESpan 90 and FIRESpan 40 meet the following:

ASTM C 665 - Federal Specification HH-I-521F—Curtain wall insulation as Types I and III, Class A, Category 1 (0.02 perm, tested in accordance with ASTM E 96 procedure).

ASTM C 612 - Federal Specification HH-I-558B—Curtain wall insulation (all) as Types 1A, 1B (0.02 perm, tested in accordance with ASTM E 96 procedure); curtain wall insulation (FIRESpan 90) as Types II, III, IVA and IVB (0.02 perm, tested in accordance with ASTM E 96 procedure); curtain wall (FIRESpan 40) as Type II.

ASTM E 136 - Rated noncombustible as defined by NFPA Standard 220 when tested according to ASTM E 136.

ASTM C 553 - THERMAFIBER Insulations adsorb less than 1% moisture by weight and volume.

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

Fire-Containment Tests Per ASTM E 2307

For more complete test information, see SA707, THERMAFIBER Life-Safety Fire Containment Systems technical catalog or UL and OPL (Intertek) Directories. For a full listing of containment systems visit www.thermafiber.com and click on Fire Rated Assemblies.

- **Aluminum Spandrel Curtain Wall Fire Containment**
- **Steel Stud-Framed/Gypsum Sheathing Curtain Wall Fire Containment**
- **Glass Spandrel Curtain Wall Fire Containment**
- **Granite Spandrel Curtain Wall Fire Containment**
- **Precast Concrete Spandrel**

Composition and Materials

THERMAFIBER Blankets are a mineral fiber material manufactured from blast furnace slag, a by-product of iron ore reduction, and naturally occurring rock. THERMAFIBER blankets contain greater than 80% post-industrial recycle content. **This product contains No Asbestos.** See MSDS for further information.

Warranty

System performance following substitution of materials or compromise in assembly design cannot be certified and may result in failure of fire performance under certain conditions. Products and systems provided by Thermafiber, Inc. are warranted to be free from defects in material workmanship. Contact Thermafiber, Inc. for complete warranty details.

Storage

Store in a cool, dry place.

Submittal Approvals

| Job Name | | | | |
|---|---|--|--|--|
| Contractor | | Date | | |
| <p>For further information on these products, including nonstandard sizes, contact Thermafiber, Inc. at 888-TFIBER1 (834-2371).</p> <p>Trademarks THERMAFIBER, FIRESpan, and THE NAME IN MINERAL WOOL are trademarks of Thermafiber, Inc. FIRECODE and SMOKE SEAL are trademarks of USG Corporation.</p> | <p>Note Products described here may not be available in all geographic markets. Consult your local sales office or representative for information.</p> | <p>Notice THERMAFIBER, Inc. shall not be liable for incidental and consequential damages, directly or indirectly sustained, nor for any loss caused by application of these goods not in accordance with current printed instructions or for other than the intended use. THERMAFIBER liability is expressly limited to replacement of defective goods. Any claim shall be deemed waived unless made in writing within thirty (30) days from date it was or reasonably should have been discovered.</p> | <p>Safety First! Follow good safety and industrial hygiene practices while handling and installing products and systems. Take necessary precautions and wear the appropriate personal protective equipment as needed. Read Material Safety Data Sheets and related literature on products before specification and/or installation.</p> | <p>Health Aspects For Health and Safety information see Material Safety Data Sheets (MSDS) and North American Insulation Manufacturers Association (NAIMA) Health and Safety Facts for Rock and Slag Wool Insulation; Document #63.</p> |



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