



# THERMAFIBER® SAFING FF FORMALDEHYDE-FREE MINERAL WOOL INSULATION

Thermafiber® introduced the first formaldehyde-free, GREENGUARD® Gold certified perimeter fire containment mineral wool insulation in North America. Thermafiber® Safing mineral wool insulation is designed to provide enhanced fire protection in perimeter fire containment systems, floor and wall penetrations, construction joints, and other firestopping applications. Thermafiber® Safing FF meets green building standards by using products that exclude red list materials like formaldehyde<sup>1</sup>. Thermafiber® Safing FF is especially appropriate for applications in education, health care, and other institutions committed to indoor air quality.

1 Living Building Challenge (LBC) Red List.



## Features

- Exceptional performance in perimeter fire containment systems
- Provides fire containment in rated assemblies
- Fire-resistant to temperatures above 2,000°F (1,093°C)
- Helps conserve energy, reduce greenhouse gas emissions
- Mold-resistant
- Enhances acoustical performance
- Minimum 70% recycled content<sup>2</sup>
- Contributes to credits in several green building programs, such as LEED® and Green Globes®
- Formaldehyde-free

## Technical Data

### TESTED TO ASTM C518

| Actual Density | "k" @ 75° [24°C] BTU.in/hr. sq. ft. °F | "R" value per inch of thickness <sup>3</sup> |
|----------------|--|--|
| 4.0 pcf        | 0.23                                   | 4.3  |
| 6.0 pcf        | 0.23                                   | 4.3  |

3 R = thickness divided by "k."

## Availability

|                | THICKNESS <sup>4</sup> | WIDTHS <sup>5</sup> | LENGTHS <sup>5</sup> |
|----------------|------------------------|---------------------|----------------------|
| Safing 4.0 pcf | 1"-7"                  | 16", 24", 36", 48"  | 48", 60"             |
| Safing 6.0 pcf | 1"-7"                  | 16", 24", 36", 48"  | 48", 60"             |
| Tolerances     | +¼", -⅓"               | ±⅛"                 | ±½"                  |

4 Thicknesses are available in ½-inch increments.

5 Custom sizes are available upon request.

## Physical Properties

| PROPERTY                                  | TEST METHOD          | VALUE   |
|---|----------------------|---|
| Corrosion of Steel, Aluminum, and Copper  | ASTM C665            | Noncorrosive, Types I, III  |
| Non-Combustibility                        | ASTM E136            | Non-Combustible   |
| Non-Combustibility                        | CAN/ULC S114         | Complies  |
| Water Vapor Sorption                      | ASTM C1104           | Sorption less than 1% by volume   |
| Surface Burning Characteristics           | ASTM E84             | Unfaced, Flame Spread 0, Smoke Developed 0<br>Foil-Faced, Flame Spread 25, Smoke Developed 0  |
| Surface Burning Characteristics           | CAN/ULC S102         | Unfaced, Flame Spread 0, Smoke Developed 0<br>Foil-Faced, Flame Spread 25, Smoke Developed 0  |
| 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 Perimeter Fire Containment System<br>Complies |
| Penetration Firestop Systems              | ASTM E814 or UL 1479 | Safing insulation used in conjunction with an approved fill, void, or cavity material sealant or other approved material in through-penetration firestop systems<br>Complies            |
| Fire Resistance of Building Joint Systems | UL 2079              | Safing insulation used in conjunction with an approved fill, void, or cavity material in construction joint systems<br>Complies   |
| Fire Tests of Firestop Systems            | CAN/ULC S115         | Complies  |
| UL Formaldehyde-Free                      |                      | Validated   |
| GREENGUARD                                |                      | Gold Certified  |

Safing products are approved by **New York City Board of Standards & Appeals** – (under BSA 39-74-SM & accepted by MEA-209-82-M, Vol. 4).

## Perimeter Fire Containment Systems Per ASTM E2307

Safing insulation is a critical component of any perimeter fire containment system. 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 Spandrel
- Steel Back Pan

For more complete test information, see UL® and Intertek® (formerly OPL) Directories. For a full listing of fire containment systems, visit [www.thermafiber.com](http://www.thermafiber.com) and click on Fire Rated Assemblies. UL Reference = TYPE SAF.

For additional job-specific details and accessory materials necessary to complete the Perimeter Fire Containment System, please refer to UL® and Intertek® design listings.<sup>6,7</sup>

See Owens Corning publication “Enclosure Solutions Perimeter Fire Containment System E2307 Curtain Wall Technical Bulletin” (Pub. No. 10020920) for more information.

See Owens Corning publication “Thermafiber® Perimeter Fire Containment System Guide” (Pub. No. 10022722) for more information.

6 UL Fire Rated Designs, UL 333 Pfingsten Road, Northbrook, IL 60062.

7 Intertek Laboratories Designs, Fire Resistance Directory, Intertek 16015 Shady Falls Rd. Elmendorf, TX 78112.

## Installation

All firestopping insulation should be installed per the tested and listed design.

- Perimeter Installation: Safing insulation should be compression-fitted between the slab edge and the FireSpan® curtain wall insulation, leaving no voids per the UL® or Intertek® design listing.
- Penetration Application: Safing insulation should be cut slightly larger than the opening and compression-fitted into the opening, leaving no voids per the UL® or Intertek® design listing.
- Construction Joint Application: Safing insulation should be compression-fitted into the joint opening, leaving no voids per the UL® or Intertek® design listing.

Always follow appropriate safety and industrial hygiene practices during installation. Wear appropriate personal protective equipment. Review SDS and literature before specification and installation.

## Product Options

Safing 4.0, 2-inch or greater thickness, is available with a vapor-retarding foil-facing. Safing 6.0, 1.5-inch or greater thickness, is available with a vapor-retarding foil-facing.

- Recycled Content Options<sup>2,8</sup>:
  - EPA Choice Fiber (U.S. Government Buildings) .....Minimum 75%
  - Standard Fiber .....70%

8 Recycled content options other than standard must be specified at time of order.

## 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](mailto: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](http://www.owenscorning.com).

## Certifications and Sustainable Features

- <sup>2</sup>Verified by ICC-ES to contain a minimum of 70% recycled content. See ICC-ES Evaluation Report VAR-1025 at [icc-es.org](http://icc-es.org).
- UL® Environment GREENGUARD Gold Certified. GREENGUARD Gold Certified products are certified to GREENGUARD Gold standards for low chemical emissions into indoor air during product usage, and are qualified for use in environments such as schools and health care facilities. For more information, visit [ul.com/gg](http://ul.com/gg).
- UL® Environment validated Formaldehyde-Free. For more information, visit [ul.com/ecv](http://ul.com/ecv).
- Thermafiber® Safing FF mineral wool insulation is participating in Declare and is Living Building Challenge compliant. For more information, visit [living-future.org/declare](http://living-future.org/declare).
- This product receives SAFETY Act designation by the U.S. Department of Homeland Security. For more information, visit [safetyact.gov](http://safetyact.gov).
- 86% biobased content for unfaced product and 64% biobased content for faced product, certified by USDA BioPreferred® program.



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## Notes

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

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