Safing Insulation is a mineral-wool-type insulation that resists temperatures up to 2,000 °F (1,093 °C), thus offering superior fire protection in a wide variety of fire-rated applications. It is a UL- and OPL-labeled product especially intended for tested UL and OPL Designs, as well as many other fire- and smoke-tested assemblies. This product is noncombustible per Standard NFPA 220 when tested in accordance with ASTM E 136, and moisture-resistant, noncorrosive, nondeteriorating, mildew-proof and vermin-proof. It permits dry construction for all-year-round work. Also, THERMAFIBER Safing Insulation is available plain, or with scrim-reinforced foil facing (FSP) that serves as a vapor retarder and/or smoke barrier.

THERMAFIBER Safing Insulation is compatible with both THERMAFIBER® Curtain Wall CW Insulations and THERMAFIBER® FIRESPAN™ Insulations.

THERMAFIBER Safing Insulation is a key element in a wide variety of fire-tested construction assemblies. It is used with THERMAFIBER Curtain Wall and FIRESPAN Insulations in applications to contain both fire and smoke to the area of origin. Especially for mid- and high-rise buildings, where fire and smoke must be prevented from spreading to the next floor. Since the floor assembly is typically fire-rated, one route for the fire spread is through and up the exterior curtain wall system. THERMAFIBER Safing Insulation is also used in conjunction with various sealants and caulks, in wall and floor penetration (poke-through) applications, head-of-wall construction joints, and other construction joints.

It is important to note that one of the most valuable yet misunderstood applications of THERMAFIBER Safing Insulation is its use in exterior curtain wall assemblies to safe-off the opening between concrete floor slabs and the curtain wall assemblies. Many people still believe the myth that all thermal insulations are the same when used in the curtain wall spandrel panels as long as THERMAFIBER® Safing Insulation is used in the assembly. This is simply not true. Actual fire tests have proven that low-melt-point insulations, such as glass fiber types, will disintegrate quickly once exposed to fire, leaving the curtain wall unprotected. Then, as the now-unprotected curtain wall disintegrates or falls away, the safing insulation will no longer be supported, and the fire will spread to the floor(s) above. Effective perimeter fire containment can only be achieved when a fire-compatible product with the ability to resist high temperatures (such as THERMAFIBER® Curtain Wall Insulations or THERMAFIBER® FIRESPAN Insulations) is used in conjunction with the THERMAFIBER® Safing Insulation, acting together as a system. (See TF685, TF686 and TF871 for additional information).

In curtain wall fire-containment applications, THERMAFIBER® Safing Insulation fills the void between the slab edge and the curtain wall insulation to contain fire. Foil-faced insulation impedes the passage of smoke and noxious gases. Install THERMAFIBER® Safing Insulation, of proper width (2” to 8” max. opening), compression fit in safe-off area (foil side up, if required) between THERMAFIBER® FIRESPAN® CW Curtain Wall Insulation and floor slabs, on safing “Z” clips spaced as required in the design (24” or 12” o.c. maximum), leaving no voids. Compression fitting the safing around critical to forming a tight seal. See specific test description for proper installation details. Install proper topping material, such as THERMAFIBER® SMOKE SEAL Compound, or other approved smoke sealants as indicated in the specific test description or architectural specification.

THERMAFIBER® Safing Insulation provides a noncombustible, fire-resistant forming/packing material for many types of penetrations in walls and floor/ceilings. In all poke-through penetrations, clean substrate of dirt, dust, grease, oil, efflorescence, loose material or other matter. With a serrated knife, cut THERMAFIBER® Safing Insulation slightly wider than the opening. Compress and tightly fit the minimum thickness and density of insulation required (per system specification) completely around penetrant. For floor slab openings, compress or install THERMAFIBER® Safing Insulation according to details indicated in the specific test description or architectural specification to seal completely around cables, ducts, piping or other utilities.

THERMAFIBER® Safing Insulation is also used as a forming material in head-of-wall, floor to floor, floor to wall, and wall to wall construction joints. It is compressed and slid into joint openings to completely fill the gap between the intersection of the walls, floor, etc.

* UL is an abbreviation for Underwriters Laboratories Inc.; OPL is an abbreviation for Omega Point Laboratories, Inc.
### Technical Data

#### Surface Burning Characteristics (According to ASTM E 84)

<table>
<thead>
<tr>
<th>Product Designation</th>
<th>Flame Spread</th>
<th>Smoke Developed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safing, Regular (Unfaced)</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Safing (Foil-Faced)</td>
<td>25</td>
<td>0</td>
</tr>
</tbody>
</table>

Products have a class A interior finish rating per NFPA 101, life safety code.

#### Product Density

<table>
<thead>
<tr>
<th>Product Designation</th>
<th>Actual Density</th>
<th>Density Tolerance-pcf(1)</th>
<th>Minimum Thickness</th>
<th>Application Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safing</td>
<td>4.0</td>
<td>-0.5 +1.0</td>
<td>1&quot;</td>
<td>safing clips and/or compression fit</td>
</tr>
<tr>
<td>Safing</td>
<td>6.0</td>
<td>-0.75 +2.0</td>
<td>1-1/2&quot;</td>
<td>safing clips and/or compression fit</td>
</tr>
<tr>
<td>Safing</td>
<td>8.0</td>
<td>-1.0 +2.0</td>
<td>1&quot;</td>
<td>safing clips and/or compression fit</td>
</tr>
</tbody>
</table>

(1) On packaging weight basis.

### Product Data

#### Standards Compliance

- **ASTM C 612-00** - Federal Specification HH-I-558B—Safing insulation as Types IA, IB and II.
- **ASTM E 136** - Rated noncombustible as defined by NFPA Standard 220 when tested according to ASTM E 136.
- **ASTM E 814 or UL 1479** - Safing insulation used in conjunction with SMOKE SEAL Compound, or other approved material in through-penetration firestop systems.
- **UL 2079** - Safing insulation used in conjunction with various sealants and caulks in construction joint systems.
- **ASTM C 553** - THERMAFIBER Insulations absorb less than 1% moisture by weight and volume.

Safing insulation products are approved by: [New York City Board of Standards & Appeals](#) – 39-74-SM & MEA 209-82-M, Vol. II.

#### 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.

#### 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:

<table>
<thead>
<tr>
<th>Job Name</th>
<th>Contractor</th>
<th>Date</th>
</tr>
</thead>
</table>

**Trademark**

THERMAFIBER, FIRESPAN and THE NAME IN MINERAL WOOL are trademarks of Thermafiber Inc. SMOKE SEAL is a trademark of United States Gypsum Company.

**Products**

Products described here may not be available in all geographic markets. Consult your local sales office or representative for information.

**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’s 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.

**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.

**Health Aspects**

Information about health aspects of using THERMAFIBER® Insulations are thoroughly explained in North American Insulation Manufacturers’ Association’s (NAIMA) Health and Safety facts for rock and slag wool insulation document #63. Contact Thermafiber, Inc. for more details.

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For the most up-to-date technical data, please refer to our website at [www.thermafiber.com](http://www.thermafiber.com)

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