NEW

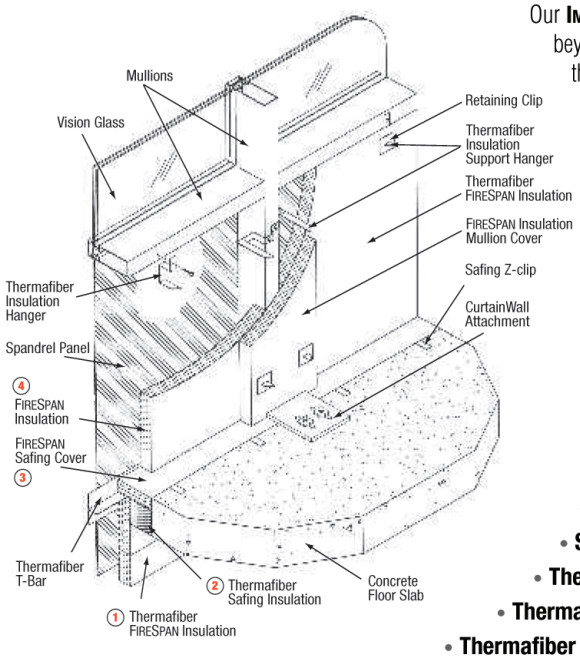
IMPASSE™ CURTAIN WALL INSULATION SYSTEM

Patent Pending

If you thought there had to be a better way to install perimeter fire protection at the exterior curtain wall and floor intersection, you were right!

This is it.

IMPASSE™ CURTAIN WALL SYSTEM DESCRIPTION



Our **IMPASSE™** Curtain Wall Insulation System has an attitude that says to fire and smoke "You will not venture beyond this point!" Like other systems, IMPASSE provides a fire-protective barrier between the fire source and the curtain wall; as well as a barrier extension between the floor slab perimeter and the curtain wall assembly itself. But unlike all other curtain wall systems, *IMPASSE employs a stepwise technique of overlapping components during installation to lock the fire barrier (FIRESPAN and safing insulation) materials in place.* This process (patent pending) virtually eliminates the possibility of insulation materials being dislodged by the violent and turbulent air forces produced when fire breaks out. As a result, components stay in place, prohibiting flames from propogating through the barrier. The system is also simpler, faster and easier to install than any other system currently available.

PRODUCT DESCRIPTION

The IMPASSE Curtain Wall Insulation System uses many of the same components used in other systems, plus a few proprietary components, which make the system functionally more effective, and a lot easier to install than other curtain wall insulation systems. *Components include:*

- **Thermafiber FIRESPAN™ Insulation – minimum 2" thickness, foil facing optional**
- **Thermafiber Safing insulation – 4" thickness, (minimum 25% compression)**
- **Thermafiber Safing Z-Clips**
- **Smoke sealant (by others)**
- **Thermafiber Insulation Hangers (proprietary)**
- **Thermafiber T-Bar Insulation Brace (proprietary)**
- **Thermafiber Universal T-Bar Attachment Clip (proprietary)**
- **Attachment screws (hex head, self-drilling #10 x 1/2" metal screws)**

SYSTEM ADVANTAGES

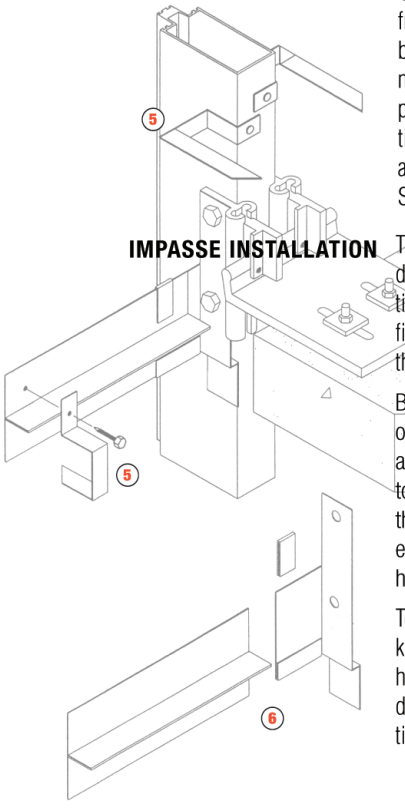
EASIER

FASTER

MORE EFFECTIVE

IMPASSE streamlines installation by changing the order of traditional installation steps to fit a more logical progression, and takes full advantage of the fire-protective, sound control and vapor barrier properties of Thermafiber FIRESPAN™ Insulation and Thermafiber Safing Insulation. The system has already been tested and approved by Underwriters Laboratories, Inc. Ratings up to three hours are achievable with this system.

Unlike traditional curtain wall insulation systems, which call for the installation of impaling pins on spandrel panel frames *prior* to installing the insulation blankets, the IMPASSE system calls for knife-like insulation support hangers to be inserted into pre-cut FIRESPAN insulation blankets *before* attachment to framing. Following steps in this order makes it much easier for installers to quickly and simply position the insulation for maximum effectiveness, and simply requires that installers attach the insulation support hangers to the framing *after* the blanket is properly positioned. Screws used for attachment are then covered by another layer of FIRESPAN insulation to protect the fasteners and mullions from intense heat in the event of a fire. The system also uniquely overlaps, or interlocks, FIRESPAN and Safing insulation in a fashion that enhances typical system performance.



IMPASSE INSTALLATION

Traditional curtain wall systems call for a solid blanket of curtain wall insulation to be applied behind the entire spandrel panel for the protection of all components, no matter whether they are stone, aluminum or glass. Safing insulation is then field cut and friction fitted between the floor slab and the curtain wall insulation to stop the propagation of fire upward between the floor slab edge and the curtain wall. Z-clips are installed to keep the safing from falling through the perimeter gap.

By contrast, the Impasse system calls for attachment of 2" thick FireSpan insulation blankets **1** on the lower portion of the spandrel first. Safing insulation **2**, cut to allow 25% compression, is then friction fitted between the floor slab and the lower spandrel insulation. Next, 2"-thick Thermafiber FireSpan Safing cover Insulation, **3** cut wide enough to cover both the safing insulation and the lower spandrel insulation blanket, is applied as a safing cover spanning the distance between the floor slab and the top flange of the T-bar. The top portion of the spandrel panel is protected by another 2" thick FireSpan blanket perpendicular to, and on top of, the safing cover, producing a sandwich to hold the FireSpan safing cover in place. The upper spandrel blanket **4** reaches to the top of the panel.

To make positioning and attachment easier, specially designed support hangers **5** are inserted into the FIRESPAN blanket before installation, leaving hands free to quickly position the blanket for maximum coverage and protection. The hangers are then screw attached to the framing. In addition to the new support hangers, Thermafiber Inc. also designed a T-bar attachment **6** that spans the mullions to serve as framework or backing for the edges of the insulation blankets. These developments, alone, are credited with reducing installation time an estimated 25% or more.

IMPASSE™

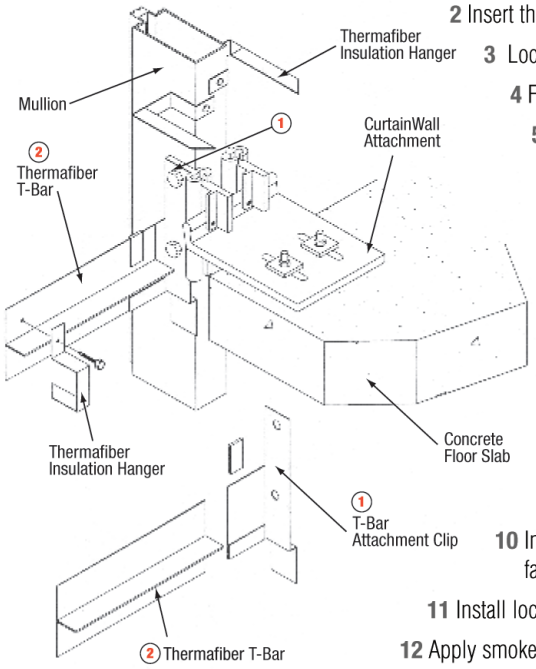
CURTAIN WALL
INSULATION SYSTEM

Other curtain wall insulation systems require the impaling clips to be attached to the curtain wall frame first, then the insulation blanket must be very accurately positioned and forced onto the insulation hangers – a dangerous and delicate task. If anything is even slightly askew, with traditional systems, the blanket typically needs to be removed and repositioned, wasting time and effort.

Installing the FireSpan insulation onto each panel in the lower and upper spandrel areas, together with safing insulation, offers two distinct advantages. First, the smaller sections of curtain wall insulation are easier to handle, assuring that the handling, alignment and installation will be easier and faster. Second, the compressed Safing insulation projects from the floor slab, to the lower FireSpan insulation blanket and is tucked in place. The FireSpan safing cover, which spans the entire distance from the floor slab across the safing and lower spandrel insulation, makes it much more difficult for flames and hot gasses to find a passage between the floor slab edge and the curtain wall. The upper section of FireSpan insulation not only protects the assembly, it also locks the FireSpan safing cover in place to assure the integrity of the system.

The system is finished with the installation of 12" wide strips of FireSpan Insulation Mullion Covers, and the application of a smoke sealant where the safing abuts the floor slab and the curtain wall insulation.

INSTALLATION STEPS



1 Attach T-bar attachment clips to curtain wall anchors by removing nuts on the anchor assembly, and reassembling so that the bolt passes through the mounting slot on the clip (can be preassembled by curtain wall manufacturer).

2 Insert the T-bar into slots on the attachment clips.

3 Lock T-bar into position with bracket clips.

4 Field cut Thermafiber FireSpan Insulation Blankets, unless the blankets have already been pre-cut.

5 Insert insulation support hangers a minimum of 2" from edge, four in each large blanket and two in the small blanket – total of ten per unit.

6 Position the lower FireSpan blanket first on the bottom portion of the spandrel panel, abutting the base of the T-bar. Then finish the spandrel cover and screw attach insulation hangers to framing mullions.

7 Field cut 4" thick unfaced safing 25% wider than the distance between the floor slab edge and the lower FireSpan spandrel insulation. Compress and friction fit between the slab perimeter and the lower FireSpan insulation blanket, assuring that the material is level with the horizontal leg of the T-bar and secured with safing Z-clips.

8 Cut 2"-thick, FireSpan Safing Cover 1/4" wider than the distance between the floor slab edge and the T-bar, and install on top of and perpendicular to the installed FireSpan insulation.

9 Install upper FireSpan spandrel insulation with 4 support hangers on top of the 2" FireSpan Safing Cover to reach the top of the spandrel panel. Screw attach hangers to framing mullions.

10 Install 12" strips of 2" thick FireSpan Mullion Covers across all mullions and support hanger attachment fasteners, impaling the insulation on top of existing support hangers.

11 Install locking washers over tips of insulation support hangers.

12 Apply smoke sealant at perimeter edge per smoke sealant manufacturer's specifications.

APPROVED CONSTRUCTIONS

Underwriters Laboratories has approved the Impasse Curtain Wall Insulation System for virtually all curtain wall fabrications that earlier had been rated using Thermafiber FireSpan insulation. The material is the same; only the method of application has changed. T-bar assembly components are required to conform to system requirements. Ratings up to 3-hr. are achievable with this insulation method. Consult the UL Directory or confer with Thermafiber Technical Services for information about a specific curtain wall construction.

TESTED SYSTEMS

Tests conducted at Underwriters Laboratories Inc. confirmed the performance of the Impasse Curtain Wall Insulation System per ASTM E2307. Those tested assemblies are now listed in the UL Fire Resistance Directory under the Curtain Wall classification. Ratings of at least 3 hours have been achieved. Others are being added as smoke sealant manufacturers test their product with the new insulation system configuration. Those systems currently listed are as follows: Thermafiber CW-D-2036, CW-D-2037, CW-D-2038, CW-D-2039, CW-D-2040, CW-D-2041, CW-D-2043, CW-D2044, CW-D-2045, CW-D-2046, CW-S-2058, CW-S-2059, CW-S-2060, other listed Thermafiber assemblies include, CW-S-1001, CW-S-2001 and CW-S-2002.

Thermafiber
THE NAME IN MINERAL WOOL™

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Insulation made from recycled material • Proudly made in USA

Limitations
This system is not approved for use in systems that were not formerly approved for Thermafiber FireSpan curtain wall insulation.

No substitution of materials is authorized. Any substitution of materials, including T-bar assembly components, curtain wall insulation, safing insulation, insulation support hangers, or safing clips, will render the tested fire rating and any warranty, expressed or implied, null and void.

Note
Products described herein may not be available in all geographic markets. Consult your Thermafiber sales representative for further information. All product and system information contained herein is believed to be accurate at the time of production. Thermafiber, Inc. reserves the right to add, alter or discontinue products without notice. For the latest information on any product, consult your Thermafiber sales representative or visit our website, www.thermafiber.com.

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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.

TF-469, 12/08

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