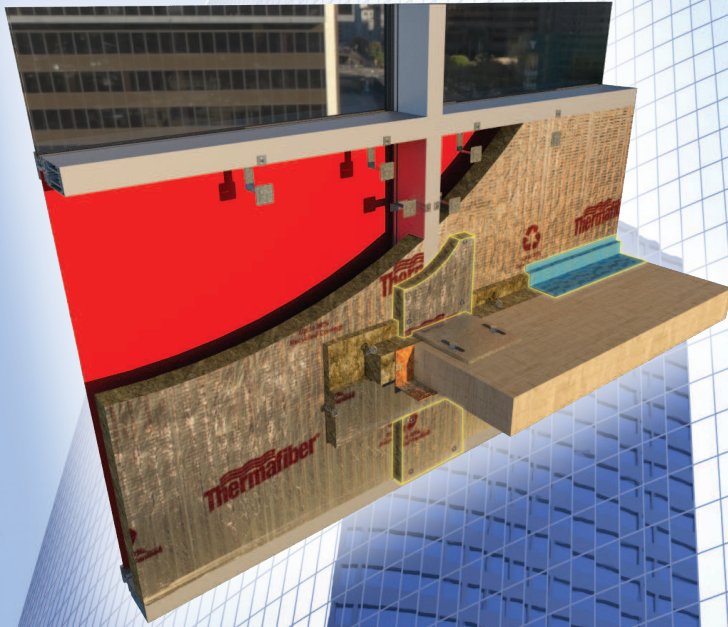


Thermafiber

NO BACKER-BAR™ SYSTEM

INSTALLATION GUIDE



- **UL approved and listed**
- **Increases the overall R-value of the building envelope**
- **Provides up to 3 hours of fire protection in curtain wall systems**
- **Patent pending design**
- **Saves time and money**
- **Eliminates the backer bar completely**

Why most systems require a backer/reinforcement member.

A backer reinforcement member can be a galvanized 20 gauge steel angle, T-Bar or hat channel. This member is installed behind the curtain wall insulation at the safe-off line as a means of keeping the curtain wall insulation from bowing due to the 25-50% compression fit of the Safing™ Insulation, depending on the listed design.

See Figure 1 which shows the location of the backer/reinforcement member. Typically, without this member, the force from installing the Safing Insulation under high compression causes the curtain wall insulation to bow. Since the Safing Insulation can not follow the plane of the bowed curtain wall insulation, small gaps form. In the event of a fire, these small gaps will allow flame and hot gases to spread vertically to the next floor.

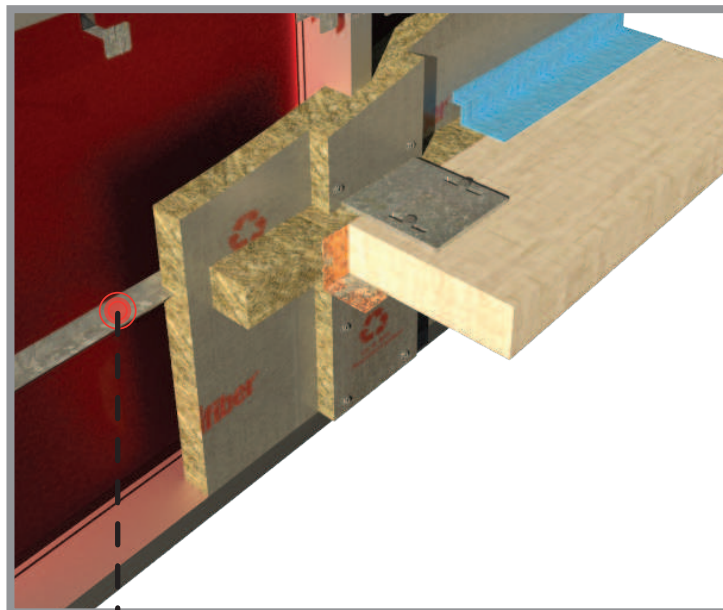
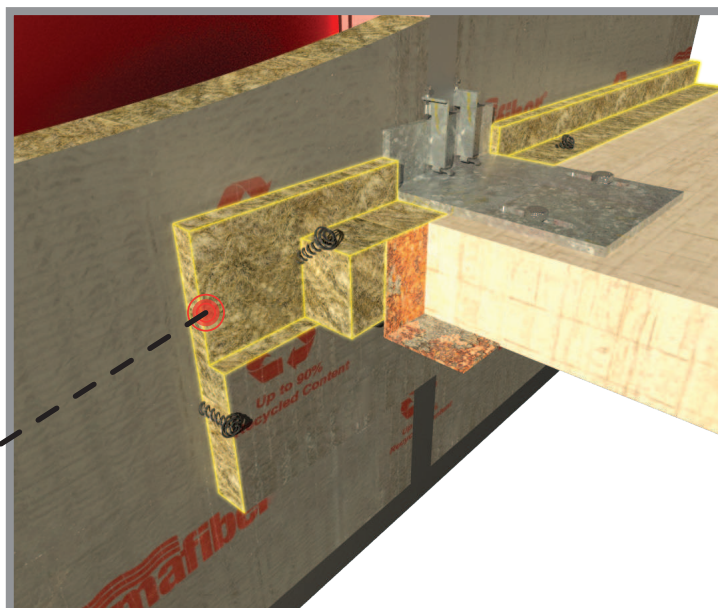


Figure 1

**Backer/Reinforcement
Member**

Thermafiber offers a system that does not incorporate a backer/reinforcement member.

Thermafiber has developed a 2 and 3 hour, UL Perimeter Fire Containment design that eliminates the need for installing a backer/reinforcement member (CW-D-1012 and CW-D-1013). This system incorporates a FireLedge®, mineral wool insulation shelf, in combination with spiral anchors to provide support to the Safing Insulation and to prevent the curtain wall insulation from bowing. See Figure 2.



FireLedge®

Figure 2

What are the advantages of a No Backer Bar System?

- Systems that include a backer/reinforcement member require mechanical attachment to the vertical mullions. Many curtain wall manufacturers want to minimize penetrations in the aluminum mullions with mechanical fasteners. The No Backer Bar System eliminates the need to make holes in the aluminum framing for a backer/reinforcement member.
- By not having to install a backer/reinforcement member, the No Backer Bar System significantly reduces installation time and labor costs.
- This system increases the R-Value of the assembly by requiring a minimum of 3" thick FireSpan® 90 insulation, and allows the space to do so since the no backer bar is present.
- Often curtain wall mounting anchors are in locations that make it impossible to properly install a backer/reinforcement member. Eliminating the need for a backer bar simplifies the installation.
- A metal panel system, also known as back pan design, requires that the backer/reinforcement member be mechanically attached to the back pan. Since the back pan is typically used to provide a vapor barrier, penetrating the panel with fasteners for the reinforcement member, may compromise the continuity of the vapor barrier. The No Backer Bar System eliminates the need to mechanically attach to the metal backpan.
- Backer/reinforcement members used with transparent spandrel glass are not aesthetically appealing. The metal channels can be seen through the glass. Using the No Backer Bar system eliminates the need for unsightly metal members.
- Many times backer/reinforcement members are improperly installed. The use of the no backer bar system eliminates potential installation errors.

How is the No Backer Bar System installed?

Step 1- Mechanically install a minimum 3" thick FireSpan 90 Insulation with Thermafiber Impasse Hangers into the spandrel framing opening so that the insulation is flush with interior face of the aluminum framing. Horizontal hangers are installed 6" in from each mullion and then spaced a maximum of 16" oc. Vertical hangers are installed 6" down from the top of the insulation panel and 6" from the bottom of the insulation panel.

Mechanically attach spandrel insulation.

**Min. 3" Thick
FireSpan 90 Insulation**



No Backer Bar Installation (cont.)

Step 2- The next step is to install the FireLedge Insulation. The FireLedge is a FSP faced insulation 12" wide by 2" thick with the 6" wide section cut down to 1" thick. See Figure 3. The FireLedge is installed in conjunction with the Safing Insulation. Rest the Safing on the 1" ledge of the FireLedge. The Safing Insulation is to be put in under a minimum 25% compression with the fibers in the vertical direction and installed at a depth of 4". Compress the Safing Insulation so that it can be installed in the safe-off opening. The FireLedge will run continuously over the FireSpan 90 Insulation and the vertical mullions at the floor level so that the 1" thick portion extends 2" above the top surface of the floor with the vertical seams abutted tightly together. Vertical seams in the FireLedge must be staggered with the vertical seams in the Safing Insulation. The top section of the FireLedge is secured to the FireSpan 90 Insulation with spiral anchors installed at a 45° angle through the Safing Insulation every 12" oc. See Figure 3. The lower section of the FireLedge is secured to the FireSpan 90 with spiral anchors installed at a 90° angle every 16" oc. See Figures 3 and 4.

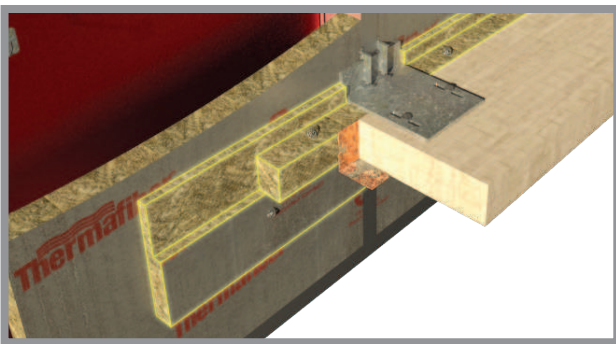


Figure 3

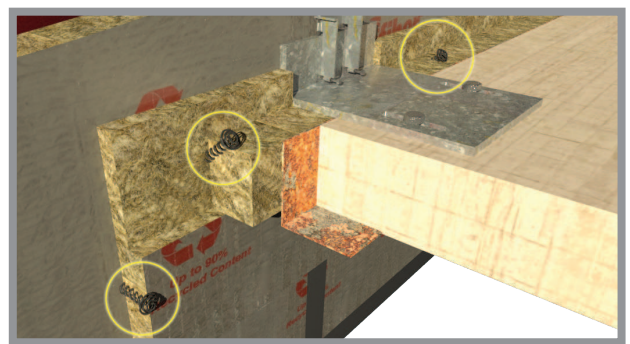


Figure 4

Step 3- Protect exposed vertical mullions with 2" minimum thickness x 10" wide FireSpan 90 Insulation Mullion Covers. Mullion Covers are to be centered over mullions and secured to curtain wall insulation with Spiral Anchors spaced a maximum of 12" oc. Mullion Covers are to be notched to step over the FireLedge material and abut the top of the Safing Insulation. Mullion Covers below the floor will abut to the bottom of the FireLedge material. See Figure 5.

Spiral Anchor

Top Mullion Covers notched out around FireLedge

Bottom Mullion Covers abutting bottom of FireLedge

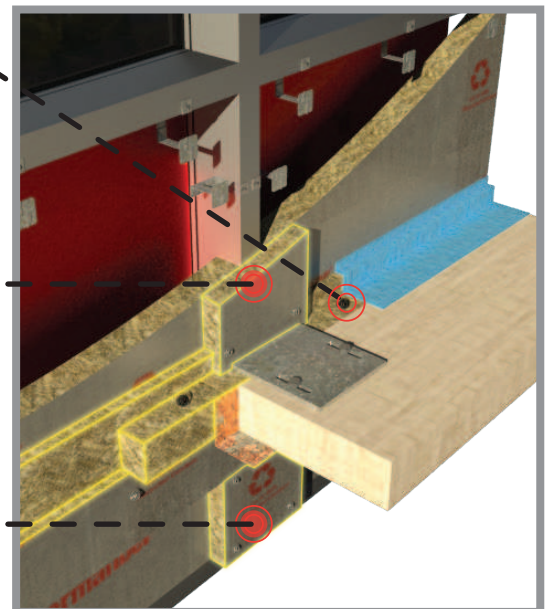


Figure 5

No Backer Bar Installation (cont.)

Step 4- Install smoke sealant material at the sealant manufacturer's specified wet thickness, spray-applied over the top of the Safing Insulation, lapping a minimum of a 1/2" onto the top surface of the floor and on to the curtain wall insulation and mullion covers. See Figure 6.

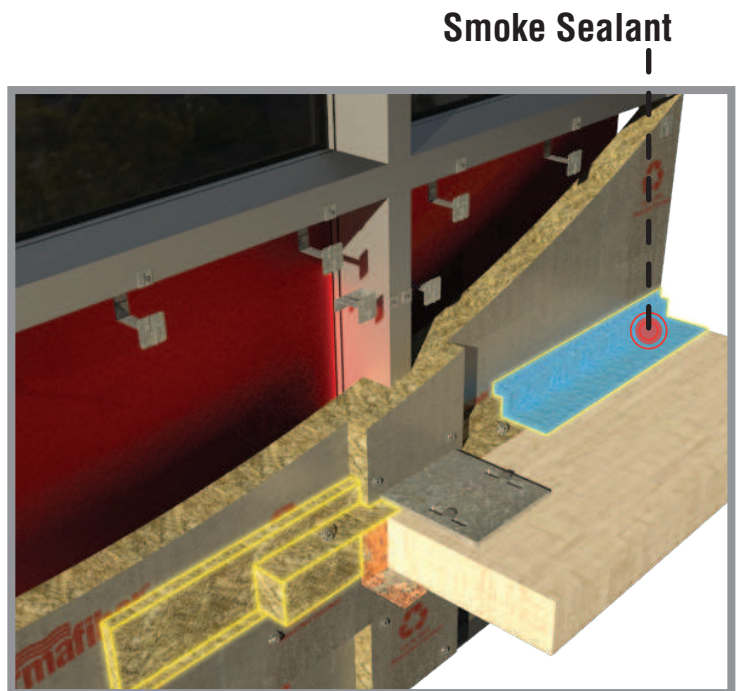
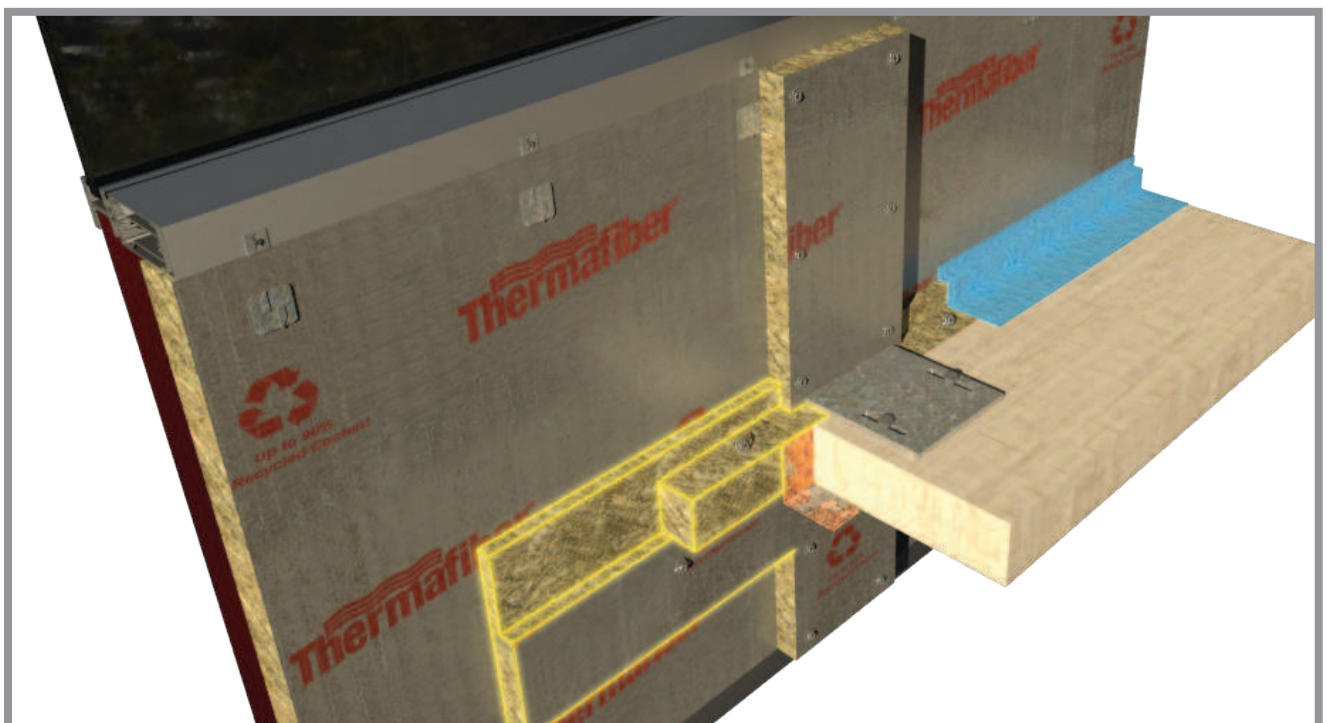


Figure 6

Completely Installed No Backer Bar System



Standards Compliance

ASTM E 2307	UL Design CW-D-1012 and CW-D-1013 (when tested as an assembly)
ASTM C 665	Type I, III (Class A, Category I)
ASTM C 612	FireSpan 90 and FireLedge Types IA, IB, II, III
ASTM C 612	Safing Insulation Types IA, IB, II
ASTM E 136	Rated Non-combustible per NFPA Standard 220
ASTM E 84	Unfaced-Flame Spread 0, Smoke Developed 0
ASTM E 84	Foil Faced, Flame Spread 25, Smoke Developed 0
ASTM C 1104	Absorbs less than 1% by volume

Thermafiber Insolutions®

Thermafiber also supports the No Backer-Bar installation system (and all of its mineral wool products) with Thermafiber Insolutions, a customized five-pronged approach that helps you easily and successfully plan, order and install insulation, Insolutions include:



All-phase consultation



High-performance products



Time-saving insulation hanger systems




Labor-saving customization and packaging



Safe & Sustainable Insulation

You need to make your building more energy efficient. Why not optimize the insulation system to include fire protection, smoke stopping and sound control? You will not only make your building more energy efficient but also safe and appealing.



LEED® Green Building Credits

Energy & Atmosphere	Materials & Resources	Indoor Environmental Quality	Innovation in Design
1	2.1, 2.2 3.1, 3.2 4.1, 4.2 5.1, 5.2	3.1, 3.2 9	1

Up to 90% Recycled Content

Contributes to 33 LEED credits across 4 categories.

It's Easy To Specify Thermafiber

To specify the NoBacker Bar System, just:

1. Go to www.thermafiber.com or log on to your favorite spec service website: www.arcat.com, www.4specs.com, www.sweets.com
2. Type "Thermafiber" in the search box
3. Click on "Specs" or follow the link to Thermafiber.com and click on "Architectural Specs"
4. That's it. Questions? Call 1-888-834-2371.



Call 1-888-834-2371 or go to www.thermafiber.com for more information or to arrange an appointment with your dedicated field representative today.

*Reed Construction Data 2010



Thermafiber Inc.
3711 Mill Street
Wabash, IN 46992
Toll Free: 888-834-2371
Toll: 260-563-2111
Fax: 260-563-8979
E-Mail: info@thermafiber.com
www.thermafiber.com



Made in the USA

