

# Trisotech® Tapered Insulation

## Polyisocyanurate Roof Insulation Board

**Composition:** Trisotech® Tapered Insulation consists of a rigid, closed cell polyisocyanurate foam core laminated on both sides to a black, fiber reinforced, non-asphaltic facer. The board panels are sloped for improved drainage of water. Trisotech Insulation is offered as 20 psi compressive strength as a standard, and a 25 psi compressive strength version is available upon request. Trisotech Tapered Insulation is CFC and HCFC free and the facers are manufactured from 100% recycled material (combination pre-consumer and post-consumer).

**Basic Uses:** Trisotech Tapered Insulation is used to provide positive drainage of water from rooftop areas. Trisotech Polyisocyanurate boards provide high thermal insulation and are compatible under most roof membrane systems. Trisotech Tapered Insulation Systems include layout drawings to support the design and construction team in providing the best drainage based on the actual conditions of the roof. Tapered Trisotech is recommended for use in combination with a coverboard in hot and cold applied BUR and MB roof systems. Meets ASTM C 1289-11, Type II, Class I, Grade 2 (20 psi) and Grade 3 (25 psi).

**Limitations:**

- Not intended for use under ponding conditions. Positive drainage is required.
- Not to be exposed to solvents, oils or other contaminants harmful to polyisocyanurate foam insulation.
- Insulation stops are required on roofs with slopes of 2:12 (2") or greater.
- Not for use directly under hot applied roof membranes. A wood fiber overlay board is required prior to the application of a hot applied roof membrane.
- Not for use in direct contact with lightweight insulating concrete or recently poured gypsum decks.
- For adhered systems where a cover board is not specified, multiple layers of Trisotech must be used when the total insulation thickness is 3.0" or greater.
- For adhered single ply systems when a cover board is not specified, the maximum thickness for the top layer of Trisotech is 2.7".

**Sizes:** Trisotech Tapered Insulation is available in truckload quantities in 4' x 4' (1220mm x 1220mm) board panels and packaged on dunnage. Thicknesses range from 1" (25mm) to 4" (101mm). System tapers typically range from 1/8" to 1/2". Contact your Tremco Representative for a full list of available thicknesses.

When Trisotech Tapered Insulation is specified for application in FAS-n-FREE Adhesive or hot bitumen, the recommended board size is 4' x 4'. Board sizes of 4' x 8' are only acceptable when mechanical attachment of insulation is specified.

**GENERAL APPLICATION DATA:**

Roof replacement usually involves more complexities than new construction roofing. Often encountered are situations such as rusted/deteriorated decks, rotted wood components, rooftop equipment which cannot be moved or shut down, and numerous other conditions.

The following application information is designed to serve as a general guide. Your local Tremco Representative will prepare detailed specifications based on the condition of your roof.

**Structural Decks:** Must be properly designed and structurally sound.

**Drainage:** Ponding conditions are unacceptable and will adversely affect the performance of any roofing system. If positive drainage does not exist, water removal from the roof surface must be facilitated by lowering drains, and/or installing additional drains, tapered insulation, or Tremco approved cellular concrete system.

**Insulation Storage:** Insulation must be dry and kept dry. When stored outdoors, stack insulation on pallets at least 4 inches (100mm) above ground level. Upon receipt of insulation on the job site, remove the factory plastic packaging. Cover the top and sides of the



Roofing & Weatherproofing Peace of Mind™

Product Advantages	
Features	Benefits
Factory Tapered Insulation	<ul style="list-style-type: none"> <li>• Provides positive drainage</li> <li>• Custom layout for rooftops</li> <li>• Conforms to existing conditions</li> </ul>
Closed cell foam	<ul style="list-style-type: none"> <li>• High thermal "R-Value"</li> <li>• Low thermal conductivity</li> <li>• Non-rotting, non-absorbent core</li> <li>• Lightweight, rigid board, easy to handle</li> </ul>
Thick fiber facer	<ul style="list-style-type: none"> <li>• Suitable for adhering to substrates in hot or cold applied adhesives</li> <li>• Protects foam core</li> </ul>
FM Approved	<ul style="list-style-type: none"> <li>• Manufactured under a FM quality assurance inspection program</li> <li>• Fire/wind protection</li> </ul>
UL Approved	<ul style="list-style-type: none"> <li>• Manufactured under UL quality assurance inspection program</li> <li>• UL classified fire protection</li> </ul>

insulation with waterproof tarpaulin (not polyethylene) and secure. Do not stack more than two pallets high.

**Surface Preparation:** Prior to installing the insulation, the substrate must be clean, dry and free of dust, dirt, oil, or other contaminants. Concrete and gypsum decks must be properly cured and sufficiently dry prior to installing insulation.

**Installation:** The use of FAS-N-FREE Adhesive for solvent free, fastener free insulation attachment is the preferred method of attachment unless otherwise specified.

**Multiple Layers:** The use of two separate layers of insulation is recommended, but required over steel decks. After securing the first layer of insulation, install the additional layer(s) with the board joints offset a minimum 6 inches (150mm) from the joints of the preceding layer. Two layers, with board joints offset, can minimize stress on the roof membrane which results from thermal movement of the deck.

**Adhesive Application:** Tremco Fas-n-Free, Tremco Low Rise Foam Adhesive, and Tremco Low Rise Foam Adhesive Green are recommended for use with Trisotech Insulation. Obtain and read the Specification Data Sheets for adhesive products prior to use.

**Bitumen Application:** Hot applied asphalt can be used to adhere Trisotech to concrete decks, to base sheets which are mechanically attached to wood or gypsum decks, and to insulation layer(s) previously secured. Hot asphalt may also be used to adhere coverboards over Trisotech Insulation. Concrete decks should be primed with Tremprime WB and allowed to thoroughly dry. Adhere insulation to substrate in a full coverage of hot applied bitumen, at a coverage rate of 30 lbs. per 100 sq. ft. (1.5 kg/m<sup>2</sup>) ± 20%. Place insulation immediately into the hot bitumen and step into place to achieve a solid bond.

**Mechanical Fastener Application:** Tremco Fasteners and Discs are recommended where mechanical attachment of the insulation is specified over steel and wood decks. Do not mix fasteners and discs of different brands unless the combination is Factory Mutual Approved.

Fasteners must be driven perpendicular to the deck. Do not overdrive the fastener, as the insulation may fracture and become susceptible to loss of attachment. Fastener should be driven tight enough so that the disc will not turn.

**PRECAUTIONS:**

User must read container labels and Material Safety Data Sheets for health and safety precautions prior to use.

**AVAILABILITY AND COST:**

Contact your local Tremco Representative for pricing and availability. For the name and number of your Representative, call the Roofing Division at 216/292-5000.

**MAINTENANCE:**

Your local Tremco Roofing Representative can provide you with effective maintenance procedures which may vary, depending upon specific conditions. Periodic inspections, early repairs and preventive maintenance are all part of a sound roof program.

**GUARANTEE/WARRANTY:**

Tremco Inc. warrants Trisotech Tapered Insulation to be free of defects and to meet published physical properties when conditioned and tested according to ASTM and Tremco standards. Under this warranty, any Trisotech Insulation that is proved to be defective when applied in accordance with our written instructions and in applica-

Physical Performance Characteristics			
Trisotech® Tapered Insulation			
Property	Typical Value	Test Method	
Compressive Strength, min.	Grade 2 - 20 psi (137kPa) Grade 3 - 25 psi (172 kPa)	ASTM D 1621	
Density, nominal	2.0 lb/ft <sup>3</sup> (32.0kg/m <sup>3</sup> )	ASTM D 1622	
Conditioned Thermal Resistance at 75°F (24°C)	<b>R Value</b>	ASTM C 518	
	LTTTR*	WEIGHT (lbs/sq ft)	RECYCLED CONTENT**
1" (25.4mm)	5.6	0.167	40%
2.5" (63.5mm)	14.4	0.417	23%
3.5" (88.9mm)	20.5	0.583	19%

\* Long Term Thermal Resistance, ASTM C 1289-11  
\*\* By weight, combined pre-consumer and post-consumer

tions recommended by Tremco as suitable for this product will be replaced with like product at no charge. THIS IS BUYER'S SOLE AND EXCLUSIVE REMEDY.

All claims concerning product defects must be made in writing within twelve (12) months of shipment. The absence of such claims in writing during this period will constitute a waiver of all claims with respect to such product.

This warranty is IN LIEU of any and all other warranties express or implied, including but not limited to, any implied warranty of MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

**TECHNICAL SERVICES:**

Your local Tremco Representative, working with the Technical Service Staff, can help analyze conditions and needs to develop recommendations for special applications. The services of the Tremco Research Center, which has earned a unique reputation in weatherproofing technology, complement and extend the services of the Tremco Technical Service staff.

**STATEMENT OF POLICY AND RESPONSIBILITY:**

Tremco takes responsibility for the furnishing of quality roofing materials, and providing specifications and recommendations for their proper installation.

As neither Tremco itself nor its Representatives practice architecture or engineering, Tremco offers no opinion on, and expressly disclaims any responsibility for soundness of any structure on which its products may be applied. If questions arise as to the soundness of a structure or its ability to support a planned installation properly, the Owner should obtain the opinion of competent structural engineers before proceeding. Tremco accepts no liability for any structural failure or for resultant damages, and no Tremco Representative is authorized to vary this disclaimer.



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