

# R-TECH®

## Description

R-Tech is a high-performance, rigid insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS) with advanced polymeric laminate facers. R-Tech is available with factory laminated metallic reflective facers, white facers or a combination of the two. The core of R-Tech is the same high-quality EPS as our InsulFoam insulations and meets or exceeds the requirements of ASTM C578 *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*. R-Tech has excellent dimensional stability, compressive strength and water resistance properties. R-Tech is an ENERGY STAR® qualified insulation and can contribute towards LEED® credits.

## Uses

R-Tech has been used successfully for numerous commercial, industrial and residential applications. The following are examples of the many R-Tech applications:

- Siding Underlayment
- Basement Walls
- Cavity Walls
- Crawl Spaces
- One-Coat Stucco
- Below Concrete Slabs
- In Floor Radiant Heating

## Advantages

- Labor Savings. Available in 4' x 8' panels and in 100 ft<sup>2</sup> (one-square) and 200 ft<sup>2</sup> (two-square) bundles, and is lightweight enough that the average contractor can carry 400 ft<sup>2</sup> at one time.
- Environmentally Friendly. R-Tech does not contain any ozone-depleting blowing agents, may contain recycled material and the foam core is 100% recyclable.
- Stable R-value. The product's thermal properties will remain stable over its entire service life. There is no thermal drift, so the product is eligible for an Insulfoam 20-Year Thermal Performance Warranty.
- Water Resistance. R-Tech facers provide a surface that is virtually impervious to moisture.
- Insect and Mold Resistance. R-Tech can be manufactured with an inert additive that deters termites and carpenter ants. R-Tech does not sustain mold and mildew growth.



University of Alaska at Fairbanks

## Benefits

Insulfoam is committed to ensuring that R-Tech Insulation products comply with the current editions of the 2012 International Building Code (IBC), International Residential Code (IRC) and International Energy Code (IECC).

R-Tech is listed with numerous agencies for compliance with building codes such as:

- ◆ Underwriters Laboratories ULEX report ER14313.01; NFPA 285 - Standard Fire Test for Evaluation of Fire Propagation Characteristics of Exterior Non-Load-Bearing Assemblies Containing Combustible Components
- ◆ Underwriters Laboratories Categories:
  - \* TGFU (Roofing)
  - \* QORW (Polystyrene Thermal Insulation, Rigid Cellular Type + ASTM C578)
- ◆ Florida Department of Business & Professional Regulation FL14328-R1
- ◆ Miami Dade County Florida - NOA No.: 14-0311.07
- ◆ Canadian Construction Materials Centre—CCMC Evaluation Listing Number 13548-L
- ◆ Factory Mutual FM Approvals (Roof Nav).
- ◆ ICC-ES - Evaluation Report ER 1788

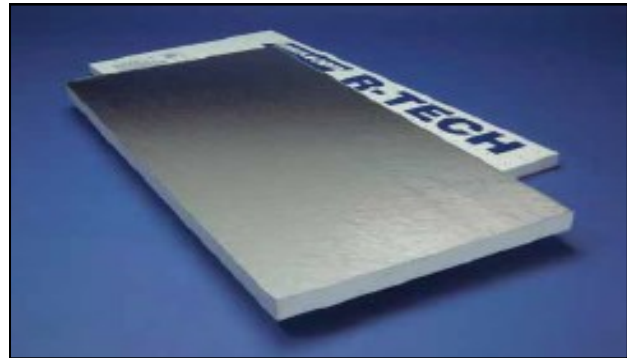
# R-TECH®

## INSTALLATION INSTRUCTIONS

The following instructions are provided for the installation of InsulFoam R-TECH insulation. These instructions provide guidance and do not cover all aspects related to the installation or use of insulation products in a structure. Check to ensure that the installation complies with the applicable code requirements such as thermal and ignition barriers. Local building-codes may have requirements for thickness and R-value of the insulation, vapor retarders, interior thermal barriers and finish materials, exterior weather resistive barriers and claddings, ventilation, insulation in adjacent areas, caulking and sealing, and other items. R-TECH insulation is not required to be installed by a trained or certified installer. As the installer, you are solely responsible for the proper installation of all materials, following product label instructions and or using proper safety precautions during installation to avoid injury. Insulfoam is not responsible for building design and accepts no responsibility for the performance of its products resulting from improper building design, construction faults, or defective installation workmanship.

Adhesive and sealant solvents, which attack InsulFoam R-TECH rigid insulation include esters, ketones, ethers, aromatic, and aliphatic hydrocarbons and their emulsions, among others. InsulFoam R-TECH insulation is not to be placed in contact with materials (or their vapors) of unknown composition, pretest for compatibility at maximum exposure temperature.

SUBSTRATE	ADHESIVE TYPE [TUBE]	APPLICATION RATE
WOOD	URETHANE	1/4" BEAD- 16" OC
METAL	URETHANE	1/4" BEAD- 16" OC
CONCRETE	URETHANE	1/4" BEAD- 16" OC



Do not install or use InsulFoam R-TECH insulation products with coal tar pitch, highly solvent extended mastics, or solvent-based adhesives without adequate separation.

Insulfoam-a division of Carlisle Construction Materials Inc., does not make any warranty with respect to suitability of adhesive products. Please check with the adhesive manufacturer to confirm the compatibility of their adhesive/ sealants with expanded polystyrene (EPS) and specific applications.

R-TECH insulation should not be installed in applications where the temperature exceeds 167°F (75°C). Protect the R-TECH from direct contact with hot objects and sources of ignition.

### Tools Needed

- ◆ Power Drill
- ◆ Saw
- ◆ Hammer
- ◆ Nail and/or pneumatic Staple Gun (minimum 6d ring-shank nails and 15/16" diameter plastic washer or minimum 1.0" wide crown staples)
- ◆ Caulk Gun
- ◆ Tape Measure
- ◆ Utility Knife
- ◆ Straightedge

### Protective Gear

- ◆ Work Gloves
- ◆ Loose-fitting, long-sleeved shirt
- ◆ OSHA-approved safety glasses
- ◆ Disposable dust respirator (NIOSH or MSHA approved)

# R-TECH<sup>®</sup>

## INSTALLATION INSTRUCTIONS

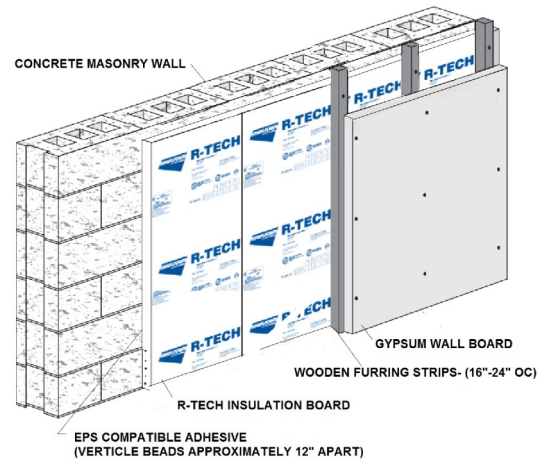
### APPLICATION OF INSULFOAM R-TECH TO A CONCRETE WALL:

1. Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.
2. Cut the boards to match the wall height.  
*Note: Cut the boards as needed to fit tightly around pipes, ducts, vents, openings or similar objects. Cracks and openings should be sealed with compatible caulk and/or sheathing tape to provide air seals.*
3. Install termination fixtures as required. Examples include corner braces, drip edges, window flashings and wall reglets.
4. Using Expanded Polystyrene (EPS) compatible adhesive, apply the adhesive to the wall, or directly to the board, in vertical beads approximately 12" apart.
5. Press/hold the board firmly to the wall.
6. Position wood battens at 16" or 24" on center spacing (vertically or horizontally) over the boards and attach using concrete fasteners through the battens and insulation into the concrete wall. *Note: Wood battens must be pressure treated when used below grade or when in direct contact with concrete.*
7. Interior Application: After completion of steps 1-6, Install a code compliant thermal barrier, such as 1/2" gypsum board if required, to the battens per the requirements of the applicable building code.

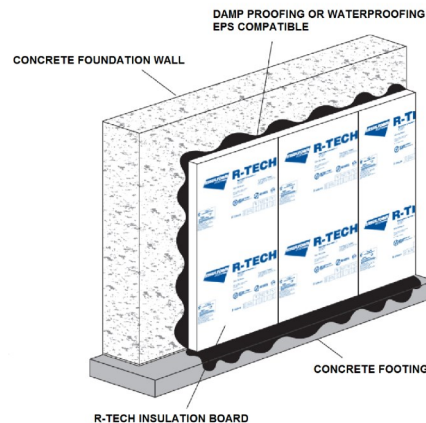
Exterior Application (above grade): After completion of steps 1-6 ensure all flashings are installed around openings and penetrations in compliance with the applicable building code. Install exterior cladding per manufacturers instructions.

Exterior Application (below grade): Follow steps 1-3. Waterproof or damp-proof walls with EPS compatible products in compliance with the applicable building code prior to installation of Insulfoam R-TECH insulation boards. Press/hold the board firmly to the wall. Back-fill and complete final grade.

#### TYPICAL INTERIOR WALL APPLICATION



#### TYPICAL EXTERIOR BELOW GRADE WALL APPLICATION



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## INSTALLATION INSTRUCTIONS

### APPLICATION OF INSULFOAM R-TECH TO A CONCRETE WALL:

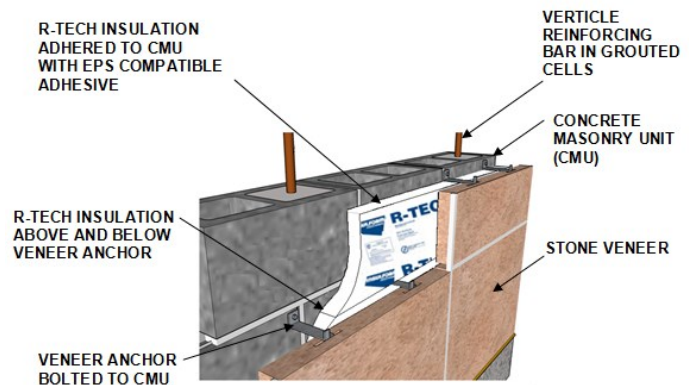
TYPICAL EXTERIOR / CAVITY WALL ABOVE GRADE  
STONE SLAB VENEER / REINFORCED CONCRETE  
BLOCK

1. Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.
2. Cut the boards to match the wall height.  
*Note: Cut the boards as needed to fit tightly around veneer anchors, pipes, ducts, vents, openings or similar objects. Cracks and openings should be sealed with compatible caulk and/or sheathing tape to provide air seals.*
3. Install termination fixtures as required. Examples include corner braces, drip edges, window flashings and wall reglets.
4. Using Expanded Polystyrene (EPS) compatible adhesive, apply the adhesive to the wall, or directly to the board, in vertical beads approximately 12" apart.

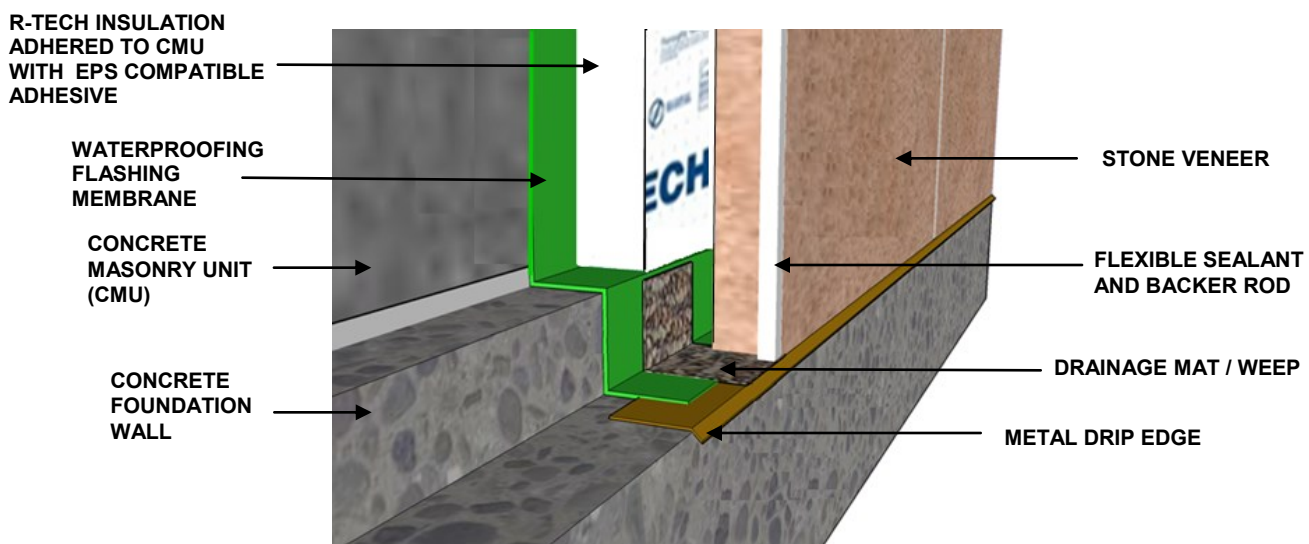
5. Press/hold the board firmly to the wall.  
After completion of steps 1-4 ensure all flashings are installed around openings and penetrations in compliance with the applicable building code.
6. Install exterior cladding (veneer) over the insulated wall surface.

Applications which incorporate a dead air space/ cavity; refer to the R-TECH cavity wall instructions.

#### WALL DETAIL-STONE VENEER CLADDING



#### WALL BASE FLASHING DETAIL



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## INSTALLATION INSTRUCTIONS

### APPLICATION OF INSULFOAM R-TECH TO A WOOD FRAMED EXTERIOR WALL:

1. Remove any obstacles or debris from the wall and area of work that may interfere with the attachment of the boards.

*Note: The wall to receive the board must be braced or sheathed in compliance with the applicable building code.*

2. Cut the boards to match the wall height.

*Note: Cut the boards as needed to fit tightly around pipes, ducts, vents, openings or similar objects. Cracks and openings should be sealed with compatible caulk and/or sheathing tape to provide air seals.*

3. Install termination fixtures as required.

Examples include corner braces, drip edges, window flashings and wall reglets.

4. Press/hold the board firmly to the wall.

*Note: All edges of the InsulFoam R-TECH insulation board must be supported by the wood studs.*

5. Attach using corrosion-resistant 1" wide crown staples through insulation and into the wood studs with a minimum 1" penetration. Fastener spacing must be no greater than 6" on center.

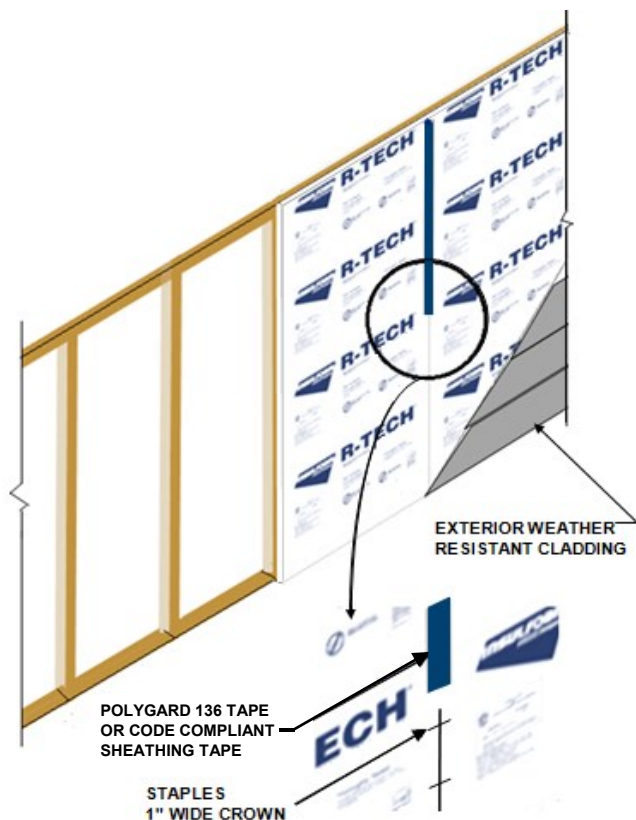
Staples - shall be galvanized steel, not less than 16 gauge and with a minimum 1" wide crown.

6. Apply Insulfoam Polygard 136 tape or sheathing tape over fastener heads, board joints, and corners if a weather resistive barrier is desired.

#### Exterior Application (above grade):

After completion of steps 1-6 ensure all flashings are installed around openings and penetrations in compliance with the applicable building code. Install weather resistive exterior cladding materials according to manufacturers installation instructions. Openings such as windows and doors shall be flashed as shown in the window details of these instructions.

#### TYPICAL EXTEIOR-WOODEN STUD WALL APPLICATION



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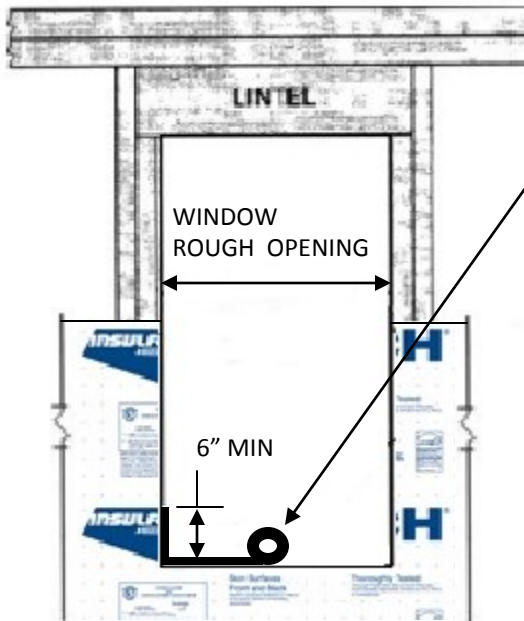
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## INSTALLATION INSTRUCTIONS

### APPLICATION OF INSULFOAM R-TECH TO A WOOD FRAMED WALL; TYPICAL WINDOW INSTALLATION

**STEP 1**

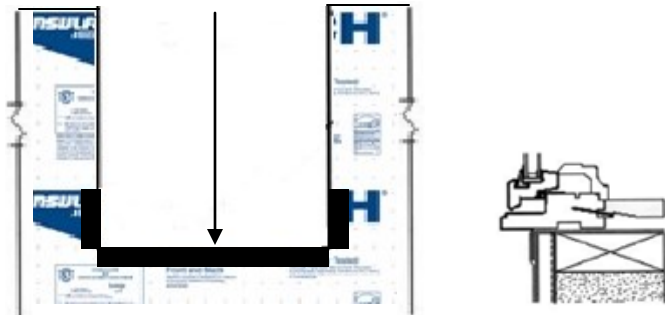


**TOP VIEW**



CODE COMPLIANT FLASHING TAPE-  
ICC-ES -AC 148

**STEP 2**



POLYGARD  
136 TAPE

**STEP 3**



**STEP 4**



**STEP 5**



**STEP 6**



**EXTERIOR CLADDING**

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For over 20 years, Insulfoam has been enabling building professionals to construct high-quality building systems at a minimal cost. Insulfoam— a division of Carlisle Construction Materials Inc., (NYSE: CSL), is one of the largest building material companies in the country. Additionally, other Insulfoam advantages include:

- End-to-end consulting: Insulfoam assists with design
- Manufactures, delivers, and provides consultative assistance during installation
- Dedicated R&D center: cutting-edge of testing and code-compliance (ICC-ES, UL, FM, MIAMI-DADE COUNTY)
- Can contribute toward LEED® credit requirements
- Long-term thermal warranty coverage



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3. Insulfoam  
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Dixon, CA 95620-9666  
(707) 678-6900

4. Insulfoam  
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Chino, CA. 91710-9041  
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5. Insulfoam/Hunter Panels  
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6. Insulfoam  
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