

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/clear printed 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.

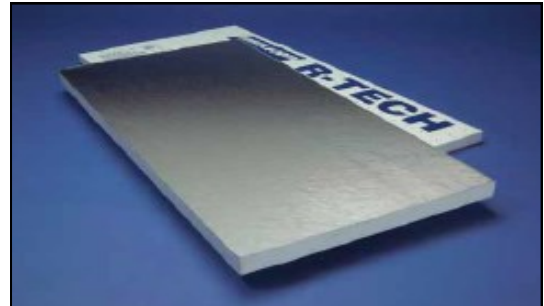
Uses

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 ft² (one-square) and 200 ft² (two-square) bundles, and is lightweight enough that the average contractor can carry 400 ft² 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 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.



Benefits

Insulfoam is committed to ensuring that R-Tech Insulation products comply with the current editions of the 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
- ◆ Underwriters Laboratories Categories:
 - * BRYX (Foam Plastic)
 - * QORW (Polystyrene Thermal Insulation, Rigid Cellular Type) & ASTM C578
- ◆ Florida Department of Business & Professional Regulation-FL14328-R3
- ◆ Canadian Construction Materials Centre—CCMC Evaluation Listing Number 13548-L
- ◆ ICC-ES - Evaluation Report ER 1788

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INSTALLATION INSTRUCTIONS

The following instructions are provided for the installation of InsulFoam R-TECH insulation in a crawl space. 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, finish materials, exterior weather resistive barriers, 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.

LIMITATIONS

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.

Do not install or use InsulFoam R-TECH insulation products with coal tar pitch, highly solvent extended mastics, or solvent-based

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

R-TECH insulation boards may be used in crawl spaces without coverings listed in IBC section 2603.4.1.6 or IRC section R316.5.3 and R316.5.4. ; provided all of the following conditions are met:

- ◆ Entry to the crawl space(s) is limited to service of utilities, and no storage is permitted. Utilities include, but are not limited to, mechanical equipment, electrical wiring, fans, plumbing, gas or electric hot water heaters and gas or electric furnaces.
- ◆ There are no interconnected crawl space areas.
- ◆ Air in the crawl space is not circulated to other parts of the building.
- ◆ Under-floor (crawl space) ventilation is provided when required by IBC section 1203.3 or IRC section R408.01.
- ◆ Combustion air is provided in accordance with IMC section 701.4 (2006 IMC).
- ◆ R-TECH insulation products are limited to a maximum thickness of 4 inches for Type I, a maximum thickness of 3-1/4 inches for Type VIII, a maximum thickness of 2-2/3 inches for Type II or a maximum thickness of 2

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INSTALLATION INSTRUCTIONS

APPLICATION OF INSULFOAM R-TECH TO A CRAWL SPACE:

1. Cut the R-TECH to appropriate length and width. All board edges must be supported by structural framing members such as floor joists and beams.

2. Cut R-TECH to fit snugly around all through-floor penetrations such as structural support columns, ducting and plumbing.

3. Secure R-TECH in conformance with local building codes and/or specified recommendations. Insulation fasteners such as cap nails, minimum 6d ring-shank nails and 15/16" diameter plastic washers or equivalent should be installed maximum 24.0 inches on center or use of minimum 1.0" wide crown nails or No. 16 gage staples spaced at 6 inches on center around the panel perimeter, and 16 inches on center in the field to framing members. The addition of field nailing members may be necessary prior to installation. Bonding with Adhesive: Using Expanded Polystyrene (EPS) compatible adhesive, apply the adhesive to the wall, or directly to the board, in vertical beads approximately 12" apart.

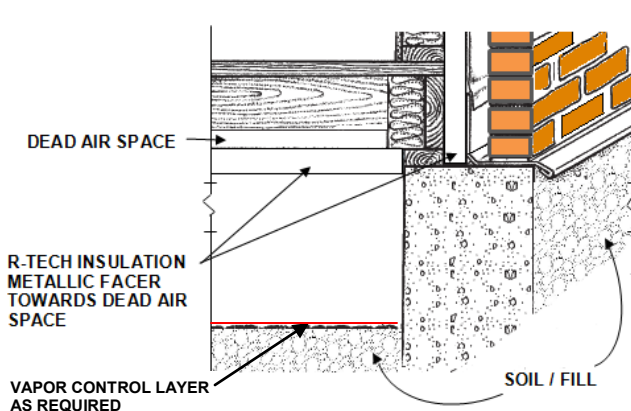
Refer to Insulfoam Technical Bulletin #26 for compatible adhesives.

4. Optional: Stagger additional layers of R-TECH and butt the board edges and ends tightly.

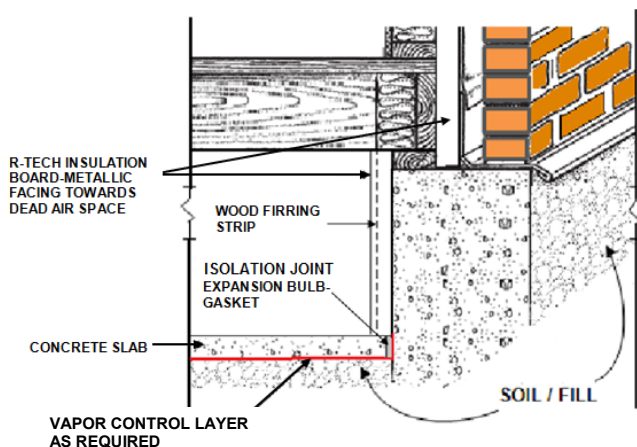
For an additional air barrier, tape all joints with Insulfoam Poly-Guard 136 tape or code compliant sheathing tape.

Enhanced R-Values-in certain applications, increased R-Values can be obtained by placing the metallic reflective (MR) side of the R-TECH towards a dead air space. R-Value gain is dependent on the amount of dead air space between the R-TECH and outer surface. R-Value gains are based on the ASHRAE Handbook of Fundamentals.

TYPICAL CRAWL SPACE (UNHEATED)



TYPICAL CRAWL SPACE (HEATED)



Disclaimer of Liability:

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For over 50 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



1. Insulfoam
628 Western Drive
Anchorage, AK 99501-1185
(907) 279-9407

2. Insulfoam
19727 57th Ave. East
Puyallup, WA. 98375
(800) 248-5995

3. Insulfoam
1155 Business Park Drive-Bldg. "A"
Dixon, CA 95620-9666
(707) 678-6900

4. Insulfoam
5635 Schaefer Av.
Chino, CA. 91710-9041
(909) 591-7425

5. Insulfoam/Hunter Panels
501 S. Emerald Rd.
Tooele, UT. 84074
(800) 735-4621

6. Insulfoam
12601 East 33rd Ave. Unit 114
Aurora, CO. 80011-1839
(800) 735-4621

7. Insulfoam
3401 W. Cocopah St.
Phoenix, AZ. 85009-6712
(602) 269-2272

8. Insulfoam
1057 Sunburst Lane
Mead, NE. 68041-9726
(800) 228-4412

9. Insulfoam
4500 South Frontage Rd.
Lakeland, FL. 33815
(800) 242-8879

10. Insulfoam-Technical Ctr.
17001 Fish Point Rd.
Prior Lake, MN 55372

