INSULFOAM ®
A **CARLISLE** COMPANY

R-TECH ®
PREMIUM ROOFING UNDERLAYMENT

Description

R-Tech (Panels) is an engineered 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-adhered 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, Type I, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation. In addition, R-Tech has excellent dimensional stability, compressive strength and water resistance properties. R-Tech is an ENERGY STAR® qualified insulation and can contribute toward LEED® credits.
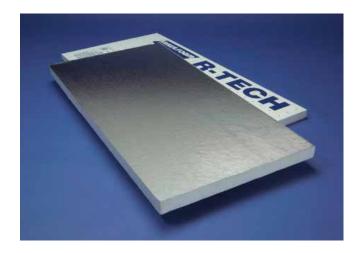
Uses

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

- Basement Walls
- Cavity Walls
- Crawl Spaces
- Interior Walls
- Waterproofing Protection Board
- Radiant-Heated Floors
- Siding Underlayment
- Stucco Underlayment
- Concrete Slabs
- Wall Sheathing
- Below-grade Insulation

Advantages

- **Environmentally Friendly.** R-Tech does not contain any dyes, may contain recycled material and the foam core is 100% recyclable.

- **User Friendly.** R-Tech can be ordered with the InsulSnap™ feature which scores the product longitudinally at any preordered interval (commonly 16" or 24" o.c.). The InsulSnap feature minimizes labor by enabling the installer to cleanly break the product at the desired width while also minimizing product breakage and waste.

- **Insect and Mold Resistance.** R-Tech is manufactured with an inert additive that deters termites and carpenter ants. R-Tech does not sustain mold and mildew growth.

- **Water Resistance.** R-Tech facers provide a surface that is virtually impervious to moisture.

- **Jobsite Durability.** With a polymeric facer on either side of it, R-Tech is extremely flexible and durable.

- **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.

- **Cost Effective.** R-Tech is typically less expensive than other comparable insulation products.

- **Proven Performance.** The same fundamental chemistry has been in use since the mid-1950s, providing proven performance.

- **Enhanced R-values.** In certain applications, increased R-values can be obtained by placing the metallic reflective 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. See the Effective R-Value chart on the following page.

Sizes

R-Tech is available in 4' x 8' sheets with thicknesses from ³⁄₈" to 5" in ¹⁄₈" increments. R-Tech can also be ordered with the InsulSnap feature which allows the end user to cleanly break the 4' x 8' sheets into any desired width. All of the R-Tech insulation products are available with metallic reflective and InsulFoam white facers. In addition, custom sizes and densities are available upon request with little or no impact on lead time.

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Installation Recommendations

Please refer to the appropriate R-Tech application sheets for recommended installation procedures.

Typical Physical Properties*

Property	Type I	Test Method
Nominal Density (pcf)	1.0	ASTM C303
C-Value (Conductance) BTU/(hr•ft2•°F) @ 25° F (per inch) @ 40° F @ 75° F	.23 .24 .26	ASTM C518 or ASTM C177
R-value (Thermal Resistance) (hr•ft2•°F)/BTU @ 25° F (per inch) @ 40° F @ 75° F	4.35 4.17 3.85	ASTM C518 or ASTM C177
Compressive Strength (psi, 10% deformation)	13	ASTM D1621
Flexural Strength (psi)	33	ASTM C203
Dimensional Stability (maximum %)	< 2%	ASTM D2126
Water Vapor Transmission (perms)	< 1.0	ASTM E96
Absorption (% vol.)	< 1.0	ASTM C272
Capillarity	none	–
Flame Spread	< 20	ASTM E84
Smoke Developed	150 - 300	ASTM E84

*Properties are based on data provided by resin manufacturers, independent test agencies and Insulfoam.

Effective R-Values (metallic-reflective facer and dead air space)

R-Tech Thickness	Design Temp.	Effective R-Value (R-Tech MR + Air Space)
0.5"	25°F 40° F 75° F	5.00 4.90 4.80
0.75"	25°F 40° F 75° F	6.10 5.90 5.70
1.00"	25°F 40° F 75° F	7.20 7.00 6.70
1.25"	25°F 40° F 75° F	8.30 8.00 7.60
1.50"	25°F 40° F 75° F	9.40 9.10 8.60
1.75"	25°F 40° F 75° F	10.50 10.10 9.60
2.00"	25°F 40° F 75° F	11.60 11.10 10.50
2.25"	25°F 40° F 75° F	12.70 12.20 11.50
2.50"	25°F 40° F 75° F	13.80 13.20 12.40

Engineered EPS
Versatile - Durable - Sustainable