

# R-TECH®

## WALL INSULATION SYSTEMS

BY INSULFOAM

### TYPE X PREMIUM FIRE RATED INSULATION

#### Description

R-Tech 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 InsulWall brand insulations and meets or exceeds the requirements of ASTM C578, Type X, 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 towards LEED® credits.

#### Uses

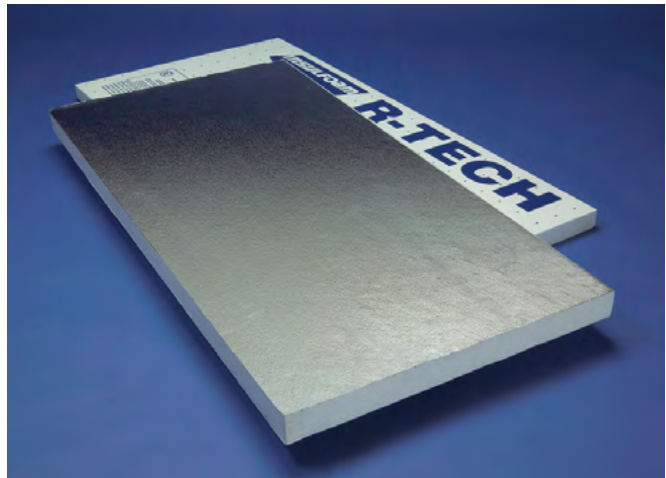
R-Tech has been used successfully for numerous commercial, industrial and residential applications. The following are examples of the many R-Tech applications:

- Basement Walls
- Cavity Walls
- Crawl Spaces
- Interior Walls
- Waterproofing Protection Board
- Tongue & Groove Insulation
- Continuous Insulation
- Radiant-Heated Floors
- Precast Concrete Panel Insulation
- Concrete Slabs
- Sheathing
- Cold Storage & Freezers
- Architectural Shapes and finishes

#### 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 pre-ordered 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.

#### THE PROVEN STANDARD FOR WALLS.



- **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, its factory laminated facer also offers installation savings.
- **Proven Performance.** EPS has been manufactured using the same chemistry 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 other side.

#### 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.

INSULATION ENGINEERED TO MAKE A DIFFERENCE.

### Installation Recommendations

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

### Key Product Comparisons

Property	R-Tech X	Type X XPS	Test Method
Density (min. pcf)	1.35	1.30	ASTM C303
Compressive Strength (psi, 10% deformation)	15	15	ASTM D1621
Flexural Strength (psi)	40	40	ASTM C203
Water Absorption (max. % vol.)	0.3	0.3	ASTM C272
Water Vapor Permeance (max. perm.)	< 1.5	1.5	ASTM E96
Dimensional Stability (maximum %)	2.0	2.0	ASTM D2126
Flame Spread	< 25	< 25	ASTM E84
Smoke Developed	< 450	< 450	ASTM E84

### Product Feature Summary

Product Features	R-Tech X	Type X XPS
Stable R-value	Yes	No
Free of HCFCs and Dyes	Yes	No
Available with Metallic Reflective Films	Yes	No
Available in a wide range of sizes and thicknesses	Yes	No

### Effective R-values\* (metallic-reflective facer & dead air space)

R-Tech X Thickness	Design Temp.	Effective R-value * (R-Tech MR + Air Space)
0.5"	40 °F	5.30
	75 °F	5.10
0.75"	40 °F	6.45
	75 °F	6.15
1.00"	40 °F	7.60
	75 °F	7.20
1.25"	40 °F	8.75
	75 °F	8.25
1.50"	40 °F	9.90
	75 °F	9.30
1.75"	40 °F	11.05
	75 °F	10.35
2.00"	40 °F	12.20
	75 °F	11.40
2.25"	40 °F	13.35
	75 °F	12.45
2.50"	40 °F	14.50
	75 °F	13.50

\* Requires 0.75"- 3.50" dead air space and the R-Tech metallic-reflective facer towards the dead air space.

### R-value Comparisons

R-Value	R-Tech X	Type X XPS	Test Method
Warranted R-values @ 20 years	4.6/inch	Not Warranted	ASTM C518 @ 40 °F
	4.2/inch	Not Warranted	@ 75 °F
Warranted R-values @ 15 years	4.6/inch	4.9/inch	ASTM C518 @ 40 °F
	4.2/inch	4.5/inch	@ 75 °F
Published R-value (Thermal Resistance)	4.6/inch	5.4/inch	ASTM C518 @ 40 °F
	4.2/inch	5.0/inch	@ 75 °F