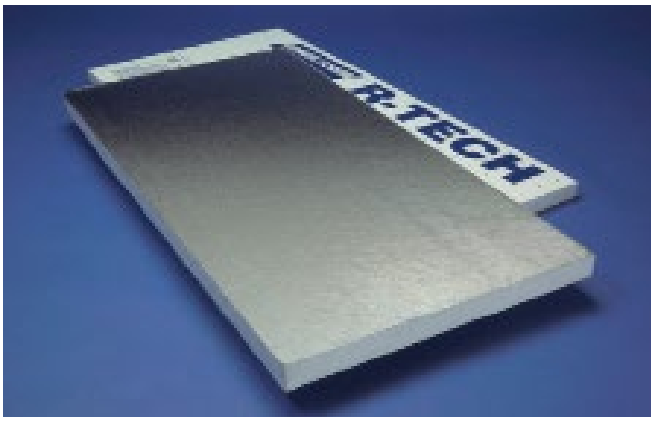
R-TECH®

BELOW GRADE INSULATION

BY INSULFOAM

TYPE I · 13 PSI
PREMIUM FACTORY FACED MOISTURE RESISTANT INSULATION

TIME TESTED PROTECTION.



Description

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

Uses

R-Tech I Below Grade Insulation is successfully used in numerous commercial, industrial and residential applications, insulating the foundation wall or slab and protecting the waterproofing or damp proofing, especially during backfilling. The following are examples of the many applications:

- Architectural Shapes
- Below-grade Insulation
- Docks & Piers
- Void Fill
- Ramps & Bridge Approaches
- Freezers & Cold Storage
- Drainage Board
- Pre-cast/Pre-stressed Concrete Panels
- Road Base
- Foundations
- Retaining Walls

Advantages

- Environmentally Friendly. R-Tech I does not contain any ozone depleting blowing agents or dyes, may contain recycled material and the foam core is 100% recyclable.
- Moisture Resistance. R-Tech facers provide a surface that is virtually impervious to moisture and the InsulFoam EPS core does not readily absorb moisture from the environment.
- Stable R-Value. The product's thermal properties will remain stable over its entire service life.
- Long Term Warranty. With no thermal drift, Insulfoam warrants this product with a 20-Year Thermal Performance Warranty.
- Varying Compressive Strengths. More available compressive strengths than comparable below grade products.
- Code Approvals. Insulfoam insulations are recognized by the International Code Council Evaluation Service (ICC-ES), for numerous applications. Please contact your local Insulfoam representative for details.
- Insect and Mold Resistance. R-Tech I is manufactured with an inert additive that deters termites and carpenter ants. R-Tech I does not sustain mold and mildew growth.
- Jobsite Durability. With a polymeric facer on either side of it, R-Tech I is extremely flexible and durable.
- Cost Effective. R-Tech I is typically less expensive than other comparable insulation products.
- 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 I 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 attached Effective R-Value chart.
- User Friendly. R-Tech I 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.

Sizes

R-Tech I 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. R-Tech I is 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.

Installation Recommendations

Please refer to the appropriate R-Tech Below Grade installation guidelines for recommended installation procedures, available at www.insulfoam.com or by asking your local Representative.

INSULATION ENGINEERED TO MAKE A DIFFERENCE.

TIME TESTED **PROTECTION.**

R-TECH® BELOW GRADE INSULATION BY INSULFOAM

R-Tech I Typical Physical Properties*

Property	Type I	Test Method
Nominal Density (pcf)	1.0	ASTM C303
C-Value (Conductance) BTU/(hr•ft²•°F) (per inch) @ 25° F @ 40° F @ 75° F	.23 .24 .26	ASTM C518 or ASTM C177
R-Value (Thermal Resistance) (hr•ft²•°F)/BTU (per inch) @ 25° F @ 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[a] (metallic-reflective facer and dead air space)

R-Tech Thickness	Design Temp.	Effective R-Value (R-Tech MR + Air Space) [b]
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

a Effective R-Values determined using InsulGrade I. Higher density InsulGrade products will provide higher R-Values. The type of construction application and the depth of the air space will also impact the actual Effective R-Value.

b Requires 0.75"- 3.50" dead air space and the R-Tech MR facer towards the dead air space.