

INSULFOAM[®]
BELOW GRADE INSULATION

BELOW GRADE SYSTEMS & SOLUTIONS



TIME TESTED PROTECTION.



INSULATION ENGINEERED TO MAKE A DIFFERENCE.



A CRITICAL BUILDING COMPONENT

Below grade insulation is often out of sight, but it should be top of mind.

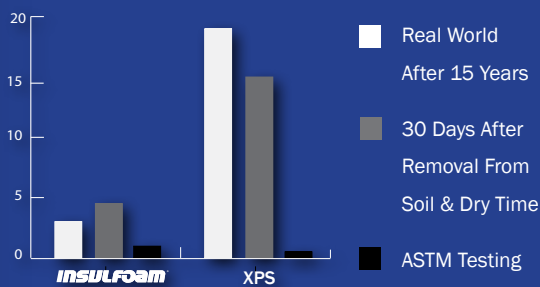
While its not often seen, lack of various below grade insulation accounts for up to 25% of a structure's total energy loss. Proper below-grade insulation helps reduce heating & cooling operating costs by 10-20%, making it an element designers and contractors cannot afford to implement correctly.

Insulfoam offers the widest variety of job ready below grade insulation products suitable for virtually any application, including:

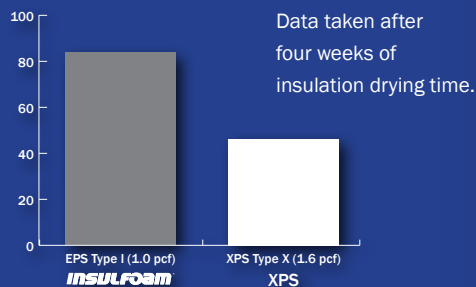
- Under Slab and Foundation Perimeter
- Waterproofing Protection Board
- Drainage Board
- Radiant Heated Floors
- Cold Storage
- Plaza Decks
- Stadium Seating
- Concrete Forms, Void Fill & Landscapes

Insulfoam EPS clearly outperforms XPS below grade insulation for less.

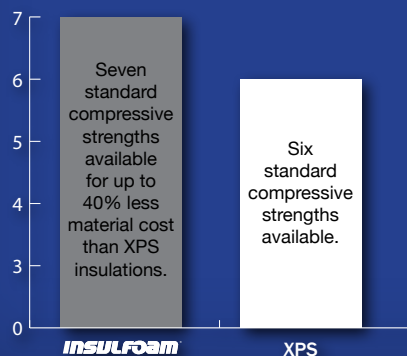
1. MOISTURE ABSORPTION %



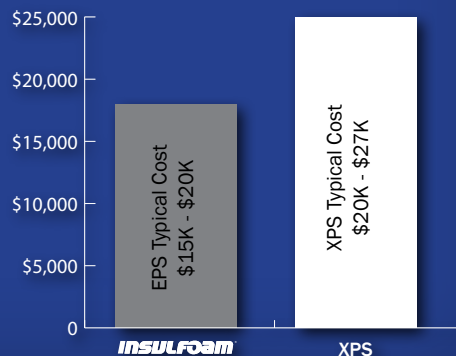
2. R-VALUE STABILITY %



3. COMPRESSIVE STRENGTH



4. COST SAVINGS



Average material savings on a job using 20,000 sf of 2" 40 psi insulation.



Long-Term Moisture Matters

EPS closed-cell below-grade insulation is designed to perform for the life of the building. InsulFoam:

- Absorbs less moisture than XPS in the long term
- Retains its R-Value during freeze-thaw cycles, unlike XPS

In a 15-yr field study comparing EPS and XPS, EPS retained an impressive 90% of its R-Value when tested after extraction. However, XPS lost almost 50% of its R-Value. After drying for 30 days, EPS came back to almost its full R-Value, whereas similarly-dried XPS recovered to just over 50% of its original R-Value.



Stable R-Values = Strong Warranty

Another critical component for R-Value stability is thermal drift while insulation is installed. In a nutshell, thermal drift is when the insulation's insulating power escapes out of the foam and is replaced by air. While XPS insulation's R-Values typically start higher than Insulfoam EPS insulations, Insulfoam does not have thermal drift. XPS insulations have thermal drift, so thermal performance is reduced every day XPS is in the field. Be sure to consider that XPS R-Values may start slightly higher at the time of manufacture, but they irreversibly decrease over time.

Product warranties reflect this perfectly. Insulfoam EPS insulations stand behind R-Value warranties 100%, while XPS warrants 90% of R-Value claims. Further, Insulfoam EPS does not void its warranty in the case of water ponding or immersion.

Cost Effective

- Highest R-Value per dollar
- 100% 20-year R-Value warranty
- 10-30% less than XPS insulations

Code-Compliant

- Insulfoam consistently meets and regularly exceeds code requirements
- The ICC code includes the use of EPS in horizontal insulation applications
- IRC Table R403.3 - "Horizontal insulation shall be expanded polystyrene or extruded polystyrene"

Green from the Start

- Up to 20 LEED points possible
- 100% recyclable
- May contain up to 15% recycled content
- Minimal jobsite waste
- No thermal drift
- Helps preserve energy and fossil fuels
- Significantly contributes toward energy efficiency code requirements



Comparing R-Values: Long-term is the right term.

When comparing rigid insulation, as compressive strengths increase & temperatures decrease, the in-field (warranted) R-Values of Insulfoam and R-Tech Below Grade products are HIGHER than the in-field (warranted) R-Values of XPS.

Property	InsulFoam II	R-Tech X	XPS Type X	InsulFoam IX	R-Tech IV	XPS Type IV	InsulFoam XIV	R-Tech VI	XPS Type VI	InsulFoam XIV	R-Tech VI	XPS Type VI
Compressive Strength (si. 10% deformation)	15 psi	15 psi	15 psi	25 psi	25 psi	25 psi	40 psi	40 psi	40 psi	60 psi	60 psi	60 psi
Water Absorption (Max. % by Vol.)	3.0	0.3	0.3	<2.0	0.3	0.3	<2.0	0.3	0.3	<2.0	0.3	0.3
Water Vapor Transmission (Max. Perm.)	3.5	<1.5	1.5	2.0	<1.21	1	<2.5	<1.1	1.1	2.5	<1.1	.1
R-Value/ In. vs. Published @ 25° F	4.8/4.8	4.8/4.8	5.0/5.6	5.0/5.0	5.0/5.0	5.0/5.6	5.1/5.1	5.0/5.0	5.0/5.6	5.1/5.1	5.1/5.1	5.0/5.6
@ 40° F	4.6/4.6	4.6/4.6	4.9/5.4	4.8/4.8	4.8/4.8	4.9/5.4	4.9/4.9	4.9/4.9	4.9/5.4	5.1/5.1	5.1/5.1	4.9/5.4
@ 75° F	4.2/4.2	4.2/4.2	4.5/5.0	4.4/4.4	4.4/4.4	4.5/5.0	4.4/4.4	4.5/4.5	4.5/5.0	4.6/4.6	4.6/4.6	4.5/5.0

TIME TESTED PROTECTION.

Choose a strong insulation foundation. Customize the right Insulfoam product for your job, while saving energy for the future.

Insulfoam EPS vs XPS

- XPS is 20-40% more expensive for the same compressive strength.
- Both EPS and XPS are closed-cell insulation.
- EPS and XPS below grade insulations are covered under the same standard - ASTM C578.
- EPS has a more stable R-Value and less long-term moisture retention than XPS.
- All Insulfoam EPS products are readily available with extremely short lead times.



INSULFOAM[®]
BELOW GRADE INSULATION

- Available in custom sized panels and blocks, for ease of material handling and installation.
- Available in widths up to 4', lengths up to 16' and thicknesses up to 40",
- Available in nominal compressive strengths of 10-60 psi.
- Customize properties to make InsulFoam suitable for your precise project needs. Exterior & exterior insulation.

R-TECH[®]
BELOW GRADE INSULATION

- Features a premium factory-applied laminate polymeric facer that is virtually impervious to moisture, keeps water from entering the insulation and away from concrete foundations & slabs.
- Available in 4'x8' panels and thicknesses starting at 3/8".
- Available in compressive strengths from 10-60 psi.
- Reduce labor with R-Tech fanfold protection board in lightweight 200 sq ft. bundles in thicknesses of 3/8", 1/2" and 3/4".

INSULFOAM[®]
DB INSULATED DRAINAGE BOARD

- Manufactured from any standard Insulfoam EPS product, DB's factory-cut channels and available filtration facers help drain and reduce hydrostatic pressure.
- Available in thicknesses up to 5".