

# EPS Below-Grade Insulation



**208-798-4449**

In order to achieve an "Energy Efficient Home to meet the New Building Codes" Architects, Designers and Contractors are increasing the R-Value of exterior walls, reducing thermal bridging and increasing the R-Value in attics of new homes being built today.

We encourage them to increase the R-Values from the conventional R-10, to an R-15 and even R-20 at the perimeter and underslab of new homes being built. Up to 25% of a buildings total heat loss occurs at the perimeter and slab of the foundation. Having the correct R-Value at below-grade insulation, is critical in achieving an energy efficient home. A well insulated foundation will save a homeowner hundreds of dollars-"\$" on cooling and heating bills annually.

R+ EPS; is a composite of versatile, high-performance, closed-cell, lightweight and resilient expanded polystyrene EPS combined with a strong film facing. Making R+ EPS Below-Grade Insulation, an energy efficient, durable and flexible insulation for perimeter and underslab applications. R+ EPS's high R-Value and tough film facing makes it the preferred Below-Grade Insulation for preventing foundation heat loss to a home.

Typical R-Value Thicknesses include R-10, R-15 and R-20. A variety of R-Value thicknesses are available from.

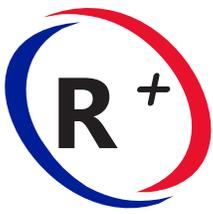
R+ EPS excellent dimensional stability and compressive strength, provides superior moisture resistance and protects foundations from expansive soils and damage during backfill.

R+ EPS Below Grade Insulation has been used successfully in both commercial and residential applications. The following are a few examples of the typical R+ EPS applications.

- |                  |                       |                                  |
|------------------|-----------------------|----------------------------------|
| + Basement Walls | + Cold Storage Floors | + Radiant-heated Floors          |
| + Below-Grade    | + Concrete Slabs      | + Waterproofing Protection Board |
| + Crawl Space    | + Concrete Block-Outs | + Cavity Wall Assemblies         |

R+ EPS Below-Grade & Underslab Insulations benefits include:

- + A warmer foundation and basement walls.
- + The dew point is moved to outside of wall.
- + It is a dimensionally stable rigid insulation, No Bowing or Cupping, No Shrinkage and/or loss of Strength.
- + A stable R-Value, there is No Thermal Drift of EPS insulation's R-Value.
- + A variety of densities, thickness and sizes are available.
- + Square or a 45° chamfered long edge is available.
- + Has no ozone depleting CFC's, HCFC's, HFC Blowing Agents, Dyes or Formaldehyde.
- + Compression protection from expansive soils.
- + R+EPS is manufactured with an inert additive that deters termites and carpenter ants.
- + EPS is inert, it does not sustain Mold or Mildew growth.
- + EPS has been around for 40 years, so the actual performance of the EPS insulation is well known.
- + EPS is the Most Cost Effective Rigid Insulation on the market, lower cost with comparable performance to Extruded Polystyrene.
- + EPS is the Only Rigid Insulation on the market, manufactured with recycled content that qualifies for LEED points.
- + The EPS core is 100% recyclable .
- + 20 year Thermal Performance Warranty.



# EPS Below-Grade & Underslab Insulation Facts

- + **Energy Efficient:** The long term performance of R+ EPS Below-Grade Insulation does not change over time. A constant and stable R-Value, keeps a heated buildings foundation warm.
- + **Durable:** Easy to handle and installs quickly. High performance EPS is encapsulated in a tough film facing. Making R+ EPS a durable, flexible and resilient insulation that can handle tough jobsite conditions.
- + **Reflective Advantage:** R+ EPS Below-Grade Insulation are available with a metallic reflective film on one side and FMI-EPS's white facer on the other side. Custom Film Facers and densities are available upon request.
- + **Moisture Resistant:** R+ EPS Below-Grade Insulation is moisture resistant and has a low rate of permeability which make it superior for below-grade and underslab applications. The integrity of R+ EPS is not affected by moisture and freeze-thaw conditions found in soil conditions.
- + **Insect and Mold Resistant:** R+ EPS can be manufactured with an inert additive that deters termites and carpenter ants. R+ EPS Below-Grade and Underslab Insulation is inert it does not sustain Mold and Mildew growth.
- + **Sizes:** R+ EPS is available in 4' x 8' sheets in whatever thickness your project requires 1/2" to 6" thick. R+ EPS can be ordered with the our "SCORE-IT" feature which allows the insulation to be cleanly broken into multiple widths for convenient installation. Custom sizes are available upon request.

**Physical Properties R+ EPS Below-Grade Insulation**

	R-10 Thikns.	R-15 Thikns.	R-20 Thikns.	Compressive Strength at 10%		% Water Absorption by Volume
				psi	psf	
R+ EPS-10 at 40° F	2.6" 2.4"	3.9" 3.6"	5.2" 4.8"	10	1,440	<4.0
R+ EPS-15 at 40° F	2.4" 2.2"	3.6" 3.3"	4.8" 4.4"	15	2,160	<3.0
R+ EPS-25 at 40° F	2.3" 2.1"	3.45" 3.15"	4.6" 4.2"	25	3,600	<2.0
R+ EPS-40 at 40° F	2.3" 2.1"	3.45" 3.15"	4.6" 4.1"	40	5,760	<2.0
R+ EPS-60 at 40° F	2.25 2.06"	3.37 3.1"	4.5 4.12"	60	8,640	<2.0

R-10 and R-15, the most common for below slabs, R-10 for below trusses.

EPS Foam Core meets or exceeds the physical and thermal property standards as established in ASTM C578

\*R means resistance to heat flow. The higher the R-value, the greater the insulating power.

Federal Trade Commission requires using the R-Value publication at 75°F temperature when calculating R-Values of all insulations. Aged R-Values of alternative products should be compared to determine long-term benefit. Some types of insulation lose their R-Value over time.

### FLAMABILITY WARNINGS

FMI-EPS's expanded polystyrene (EPS) products are combustible, as are all organic materials. They must not be stored or installed near open flame or any other source of ignition. In addition, when EPS installation board is installed in the interior of any occupied structure, it must be protected by proper thermal barrier, and the installer must review applicable local, state and federal building codes to determine the correct thermal barrier for the particular application.

### ADJOINING MATERIALS WARNING

Expanded polystyrene(EPS) is subject to attack by liquid solvents or by most solvent based adhesives and other liquid products such as gas, diesel, etc. Care should also be taken to separate any coal tar pitch products or coal tar pitch vapors from any direct contact with EPS foam.



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