

INSULGRADE I

10 PSI MOISTURE-RESISTANT INSULATION

Description

InsulGrade I (InsulFoam I) is an engineered insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS). InsulGrade I meets or exceeds the requirements of ASTM C578, Type I, Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation. InsulGrade I has a nominal density of 1.0 lb/ft³. In addition, InsulGrade I offers a long-term, stable R-value and has excellent dimensional stability, compressive strength and water resistance properties.

Uses

InsulGrade I is successfully used in numerous commercial, industrial and residential applications. It is designed to insulate the foundation wall or slab and protect the waterproofing or damp proofing, especially during backfilling.

Typical Construction Applications: InsulGrade I is used in assorted building applications, including pre-stressed and pre-cast structural concrete panels, siding backer board, building sheathing, roads and bridge fill, below-slab and perimeter insulation, architectural shapes, docks and piers, void fill, foundations, retaining walls and numerous other geofoam applications.

Advantages

- **Environmentally Friendly.** It does not contain any ozone-depleting blowing agents, may contain recycled material, and is 100% recyclable if ever removed or replaced.
- **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.
- **Proven Performance.** EPS has been manufactured using the same EPS chemistry in use since the mid-1950s, providing proven performance.
- **Water Resistance.** InsulGrade I does not readily absorb moisture from the environment.
- **Code Approvals.** InsulGrade I is recognized by the International Code Council Evaluation Service (ICC-ES), and has numerous Underwriters Laboratory and Factory Mutual Approvals. Please contact your local Insulfoam representative for details.



Sizes

InsulGrade I is available in 4' x 4' and 4' x 8' standard sizes with thicknesses from 1/4" to 40", and is readily available in custom lengths and widths with little to no impact on lead time. It is also available in tapered panels.

Typical Tested Physical Properties*

Property	Test Method	Value
Density (nom. pcf)	ASTM C303	1.00
C-Value (Conductance) - per inch BTU/(hr•ft ² •°F)	ASTM C518	0.230
	or	
	ASTM C177	0.240
R-value (Resistance) - per inch (hr•ft ² •°F)/BTU	ASTM C518	4.35
	or	4.17
	ASTM C177	3.85
Compressive Strength (psi, 10% deformation)	ASTM D1621	10-14
Flexural Strength (min. psi)	ASTM C203	25
Dimensional Stability (maximum %)	ASTM D2126	2.0
Water Vapor Permeance (max. perm., 1 inch)	ASTM E96	5.0
Water Absorption (max. % vol.)	ASTM C272	4.0
Capillarity	-	none
Flame Spread	ASTM E84	< 20
Smoke Developed	ASTM E84	150-300

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