

# INSULWALL

## FIRE-RATED INSULATION

### Description

InsulWall (InsulFoam) is an engineered insulation consisting of a superior closed-cell, lightweight and resilient expanded polystyrene (EPS). InsulWall meets or exceeds the requirements of ASTM C578, *Standard Specification for Rigid, Cellular Polystyrene Thermal Insulation*. InsulWall can be manufactured in a wide range of block and panel sizes, and in a wide assortment of shapes and densities. In addition, InsulWall offers a long-term, stable R-value and has excellent dimensional stability, compressive strength and water resistance properties. InsulWall is an ENERGY STAR® qualified insulation and can contribute toward LEED® credits.

### Uses

InsulWall is successfully used in numerous commercial, industrial and residential applications. The following are examples of the many InsulWall applications:

- Commercial Roofing Insulation
- Packaging
- Architectural Shapes
- Below-grade Insulation
- Metal Roof Flute-Fill
- Docks & Piers
- Void Fill
- Ramps & Bridge Approaches
- Pre-cast/Pre-stressed Concrete Panels
- Road Base
- Foundations
- Retaining Walls
- Sheathing
- Interior Wall Insulation
- Exterior Insulation Finishing Systems (EIFS)

### Advantages

- **Environmentally Friendly.** InsulWall does not contain any ozone-depleting blowing agents, may contain recycled material and is 100% recyclable.
- **Insect and Mold Resistance.** InsulWall can be manufactured with an inert additive that deters termites and carpenter ants. InsulWall does not sustain mold and mildew growth.
- **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 chemistry since the mid-1950s, providing proven performance.



- **Water Resistance.** InsulWall does not readily absorb moisture from the environment.
- **Cost Effective.** Typically less expensive than comparable insulation 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.

### Sizes

InsulWall is offered in an assortment of sizes and shapes and is readily available in custom lengths, widths and densities with little to no impact on lead time.

### Installation Recommendations

Please refer to the appropriate InsulWall application sheets for recommended installation procedures.

# INSULWALL VIII

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## Typical Properties of InsulWall\*

Property	Type I	Type VIII	Type II	Type IX	Type XIV	Type XV	Test Method
Nominal Density (pcf)	1.0	1.25	1.5	2.0	2.50	3.0	ASTM C518 or ASTM C177
C-Value (Conductance) BTU/(hr•ft <sup>2</sup> •°F)							ASTM C518 or ASTM C177
(per inch)							
@ 25° F	.230	.220	.210	.200	0.198	0.196	
@ 40° F	.240	.235	.220	.210	0.206	0.198	
@ 75° F	.260	.255	.240	.230	0.222	0.217	
R-value (Thermal Resistance) (hr•ft <sup>2</sup> •°F)/BTU							ASTM C518 or ASTM C177
(per inch)							
@ 25° F	4.35	4.55	4.76	5.00	5.05	5.10	
@ 40° F	4.2	4.25	4.55	4.76	4.85	5.05	
@ 75° F	3.9	3.92	4.17	4.35	4.50	4.60	
Compressive Strength (psi, 10% deformation)	10 - 14	13 - 18	15 - 21	25 - 33	40	60	ASTM D1621
Flexural Strength (min. psi)	25	30	35	50	60	75	ASTM C203
Dimensional Stability (maximum %)	2%	2%	2%	2%	2.0	2.0	ASTM D2126
Water Vapor Permeance (max. perm., 1 inch)	5.0	3.5	3.5	2.0	2.5	2.5	ASTM E96
Water Absorption (max. % vol.)	4.0	3.0	3.0	2.0	2.0	2.0	ASTM C272
Capillarity	none	none	none	none	none	none	—
Flame Spread	< 20	< 20	< 20	< 20	< 20	< 20	ASTM E84
Smoke Developed	150 - 300	150 - 300	150 - 300	150 - 300	150-300	150-300	ASTM E84

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