



# EXPANDED POLYSTYRENE PRODUCTS

Insulfoam is a pioneer in molded polystyrene foam products, with eleven manufacturing plants from Alaska to Ohio. Insulfoam is the oldest and largest producer of expanded polystyrene in the Nation.

Insulfoam EPS (expanded polystyrene) is a closed cell, rigid cellular plastic made from petroleum derived products. For most construction/insulation applications, it is manufactured with a density of 1.0-2.5 pounds per cubic foot. Insulfoam EPS is best known for its thermal efficiency, versatile applications and ease of installation.

Insulfoam EPS is manufactured in a two stage process from expandable polystyrene beads. In the first stage, these small spheres are subjected to high temperature steam, causing the incorporated blowing agent to volatilize and the individual beads to expand. The "pre-puff" is allowed to stabilize and is then fed into a large mold. Steam is reintroduced and the heat produces a secondary expansion that fuses the beads into a homogenous block of expanded polystyrene. The standard block is molded in widths of 2' to 4' and lengths of 8' to 24' with any thickness available up to 33".

## Unbeatable Qualities!

Insulfoam EPS offers a unique combination of qualities, making it your ideal insulating material.

- No CFC's or HCFC's
- No Formaldehyde
- No Thermal Drift
- UL, FM, UBC Code Listed
- ICBO, BOCA, SSBCCI Code Approved
- Low water absorption
- Recyclable
- Environmentally safe and inert
- Highest R-value per dollar
- 20 Year R-Value Warranty
- Noncorrosive, Nonfriable
- Independently QC Certified
- Proven System Compatibility

## The Choice in Residential and Commercial Insulation Applications

- Perimeter Foundation Insulation
- Structural Building Panels
- Exterior Wall Insulation
- Sub Slab Insulation
- Cold Storage
- Tapered Roof Systems
- Flotation
- Packaging
- Special Shapes
- Commercial Roofing
- Nail Base Roofing
- Reroofing
- Residing

• Mead, Nebraska (402) 624-6611 • Salt Lake City, Utah (801) 956-2808 • Anchorage, Alaska (907) 279-9407 • Chino, California (909) 591-7425 • Columbus, Ohio (614) 409-4444 • Lakeland, Florida (863) 688-8879

• Aurora, Colorado (303) 366-7730 • Kent, Washington (206) 242-9424 • Dixon, California (707) 678-6900 • Phoenix, Arizona (602) 269-2272 • Dallas, Texas (800) 228-4412 • Anderson, South Carolina (864) 224-0900

# Physical Properties Of Insulfoam Expanded Polystyrene, EPS

FEDERAL SPECIFICATIONS: INSULFOAM PRODUCT MEETS ASTM C578 (SUPERSEDES FEDERAL SPECIFICATION HH-I-524C)

## PHYSICAL PROPERTIES OF INSULFOAM Thermal Insulation meeting ASTM C 578

PROPERTY	ASTM TEST	TYPE I	TYPE VIII	TYPE II	TYPE IX
<b>Density</b> , Minimum lb/ft <sup>3</sup>	C303/D 1622	0.9	1.15	1.35	1.8
<b>Thermal Resistance</b> (R Value) 1.00 IN, (25.4mm) thickness F•ft <sup>2</sup> •h/Btu	C177/C 518 AT 40 F AT 75 F	4.17 3.85	4.25 3.92	4.55 4.17	4.76 4.35
<b>Compressive</b> resistance at yields or 10% deformation, whichever occurs first (with skins intact), psi	C 165/D 1621	10.0-14.0	13.0-18.0	15.0-21.0	25.0-33.0
<b>Flexural</b> strength, psi	C 203	25.0-30.0	32.0-38.0	40.0-50.0	50.0-75.0
<b>Water Vapor</b> permeance of 1.00 in (25.4 mm) thickness perm	E 96	2.0-5.0	1.5-3.5	1.0-3.5	0.6-2.0
<b>Water Absorbtion</b> by total immersion (25.4 mm) thickness perm	C272	<4.0	<3.0	<3.0	<2.0
<b>Dimensional Stability</b> (change in dimensions) maximum %	D 2126	<2.0	<2.0	<2.0	<2.0
<b>Oxygen Index</b> , minimum %	D 2863	>24.0	>24.0	>24.0	>24.0
<b>Maximum Use Temperatures</b> Continuous Exposure °F. Intermittent Exposure °F.	- -	167° 180°	167° 180°	167° 180°	167° 180°
<b>Fungus &amp; Bacterial Resistance</b>	FHA Test Procedure	Will not support bacteria fungus No food value			
<b>Buoyancy-Flotation</b> lbs./cu. ft.		60 lbs./cubic foot			

## SURFACE BURNING CHARACTERISTICS

(U.L. File No. R5212)

B.R.Y.X.

1/2 - 5 in. Thick +

15#

150-300#

FLAME SPREAD  
SMOKE DEVELOPED

+ - Installed in a thickness, or stored in an effective thickness, as indicated, for a density of 1.0 to 2.0 lb/ft.<sup>3</sup>

# - Flame spread and smoke developed recorded while material remained in the original test position. Ignition of molten residue on the furnace floor resulted in flame travel equivalent to calculated flame spread index of 125 and smoke developed index of over 500.

### FLAMMABILITY WARNING

Insulfoam'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 insulation board is installed in the interior of any occupied structure, it must be protected by a 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.

### MANUFACTURER'S STATEMENT

These numerical flame spread and smoke ratings are not intended to reflect hazards presented by this material under actual fire conditions.

### READ THIS BEFORE YOU BUY

WHAT YOU SHOULD KNOW ABOUT R-VALUES: The chart shows the R-value of this insulation, R means resistance to heat flow. The higher the R-value, the greater the insulation power. Compare insulation R-values before you buy.

There are other factors to consider. The amount of insulation you need depends mainly on the climate you live in. Also, your fuel savings from insulation will depend upon the climate, the type and size of your house, the amount of insulation already in your house and your fuel use

patterns and family size. If you buy too much insulation, it will cost you more than what you'll save on fuel. To get the marked R-value, it is essential that this insulation be installed properly.

### LIMITED WARRANTY AND REMEDY

Insulfoam warrants to the original purchaser for a period of one year from the date of delivery to that purchaser that our expanded polystyrene (EPS) products are manufactured in accordance with our specifications and are free from defects in workmanship and materials using those specification as standards. Insulfoam makes no other representation or warranty of any kind, express or implied, in fact or in law, including, without limitation, the warranty of merchantability or warranty of fitness for a particular purpose, other than the limited warranty set forth in the preceding sentence. The limit and exclusive remedy for our liability shall be to supply and an equivalent amount of product for any material returned to us within one year of shipment to the original purchaser and found to be defective by us, regardless of whether the defect was latent or obvious. Replacement of a nonconforming product is the purchaser's or user's exclusive remedy and we will not be responsible for any consequential damage, loss or injury of any kind.

Insulfoam does not practice engineering or architecture. No agent, salesman, or representative is empowered to change, alter, or amend the above statement unless done in writing by a duly authorized officer of Insulfoam.

### ADJOINING MATERIALS WARNING

Expanded polystyrene (EPS) is subject to attack by liquid solvents or by most solvent base 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.