POLYSOURCE INDUSTRIES

PSI HiLift

Spray Foam Insulation

Product Description:

PSI HiLift spray foam insulation is a spray-applied, two component, closed cell polyurethane foam insulation system. The product is formed by the reaction of proprietary resin blend and polymeric methylene diphenyl diisocyanate. The resin blend is comprised of Polyols, additives, fire retardants and Solstice LBA by Honeywell.

The spray applied nature of PSI HiLift spray foam allows the material to flow into voids and seal cracks, expanding to form a monolithic structure with high R-value (resistance to heat flow). PSI HiLift spray foam can form various control layers for buildings and structures: insulation, air barrier, moisture retarder and weather barrier.

Product Uses:

Cold Storage	Walls	Attics
Crawlspaces	Tanks	Pipe Insulation
Exterior Applications	Ducts	Foundations
Concrete slab		

ASTM E-84:

PSI HiLift spray foam is an ASTM E-84 (NFPA 255, UL723) class 1 (Class A) spray foam insulation.

Flame Spread Index <25
Smoke Developed Index <450
Thickness 4 inches

These numerical flame spread values are not a true reflection on how this or any material will perform in actual fire conditions.

Thermal Barriers:

PSI HiLift spray foam must be separated from the interior of the building (occupied space) by an approved 15 minute thermal barrier such as ½" inch gypsum board or other equivalent material. Consult local building codes for requirements and restrictions.

Chemical Attributes:

Component	Viscosity (25°C)	Density
Isocyante	200 cps	10.3 lbs/gal
Resin	700 cps	10.3 lbs/gal

Typical Physical Attributes:

Property†	Test Method	Value
Apparent Density	ASTM D-1622	2 lbs/ft^3 (nominal)
R-value (aged)	ASTM C-518	7.2 R/in
Compressive Strength	ASTM D-1621	nom. 25 lbs/in^2
Tensile Strength	ASTM D-1623	nom. 50 lbs/in^2
Closed Cell Content	ASTM D-6226	> 90% (vol.)
Water Absorption	ASTM D-2842	< 2%
Water Vapor Permeance	ASTM E-96	< 2 perm-inches
Fungi Resistance	ASTM C-1338	No growth
Flame Spread Index	ASTM E-84	< 25
Smoke Developed Index	ASTM E-84	< 450
Dimensional Stability, -20°F	ASTM D-2126	< 5% Change
Dimensional Stability, +158°F	ASTM D-2126	< 10% Change
Dimensional Stability, +158°F & 100%R	ASTM D-2126	< 10% Change
Ignition Barrier	ICC ES AC377 Appendix X	Pass no coating
Thermal Barrier	NFPA 286	Pass DC315 89 ft^2/gal
Global Warming Potential	n/a	1

† These values are typical. However values will vary and should not be considered part of the product specifications. It is imperative that the trained applicator read and understand this technical datasheet and SDS to process the material correctly and understand environmental and equipment limitations.

Storage & Shelf Life:

PSI HiLift spray foam components have an optimal shelf life of 6 months when stored in unopened containers at temperature between 50 – 70°F. Excessively high temperatures may reduce optimal shelf life. Store material at 70 – 90°F for 48 hours prior to application of the product.

Environmental Considerations:

PSI HiLift spray foam insulation is available in two grades for various environmental conditions:

AMBIENT & SUBSTRATE TEMPERATURE	
Regular	**Winter**
50 - 110°F	30 - 80°F

Wind speeds in excess of 10 mph may cause loss of exotherm or cause overspray onto adjacent objects or structures. It may be necessary to use wind screens.

Substrate Preparation:

All surfaces must be clean and dry, free of dirt, oil, solvents, grease and loose particles for optimal adhesion. PSI HiLift spray foam bonds tenaciously to most clean substrates. Moisture content of wood products should be < 18% and concrete must age at least 28 days before application of PSI HiLift spray foam can occur. Consult Polysource Industries for specific recommendations on primers or substrates.

Service Temperature:

PSI HiLift spray foam insulation is designed to be used in ambient temperatures from -40°F and 180°F, 220°F intermittent. It is strongly recommended that test sprays be conducted before installation for use in extreme temperatures.

SPF Processing Parameters:

PSI HiLift spray foam is designed to be applied by trained contractors using high pressure, plural component spray proportioners. The spray proportioner must be able to maintain the designed temperature and pressure for PSI HiLift spray foam products:

A/B/Hose Temperature	120 - 140°F
A/B Dynamic Pressure	1000 - 1500 lbs/in^2

Optimal spray settings will vary with proportioner, hose dimensions, gun configuration and ambient conditions. It is critical for sprayers to understand the limitations associated with their equipment.

Pass thickness:

PSI HiLift spray foam should be applied at a minimum thickness of ½ inch and a maximum thickness of 4 inches. For substrates with sensitivity to heat like plastic or metal, tests should be done to understand the effect of the SPF exotherm on the material. In some cases putting on a flash coat first is recommended to prevent any adverse effects on the substrates. It is the responsibility of the contractor to determine when the first layer has cooled sufficiently for additional passes.

Safety and Handling Information:

It is critical to read and become familiar with the Safety Datasheets prior to working with PSI HiLift spray foam liquid components. During application respiratory protection is required for the applicator and bystanders or helpers. For more information consult Safety Datasheets, www.polysource.ca