

Thermoseal 500Hy

Light Density • Open Cell Spray Foam Insulation

ThermoSeal 500Hy is a two component, semi-rigid, totally water blown, .5lb light density polyurethane foam insulation system which simultaneously insulates and air-seals your building structure. ThermoSeal 500Hy requires the use of an "A" component (ISO) and a blended "B" component (RESIN), which contains ZERO ozone depleting blowing agents, catalysts, polyols and fire retarding materials. ThermoSeal 500Hy is designed to make homes more energy efficient, quieter, healthier and more comfortable. ThermoSeal 500Hy is applied as a liquid spray which expands approximately 100 times its initial mass and cures within seconds into a semi-rigid mass. ThermoSeal 500Hy fills all building cavities completely, sealing all cracks, crevices, and voids where air loss and infiltration are most common. If needed, excess material is easily trimmed off leaving a surface ready for drywall.

Physical Properties

Property	Value	Test Method
R-Value	3.7 @ 1"	ASTM C 518
Core Density	0.48 LB / Cubic Foot	ASTM D 1622
Open Cell Content	> 97%	ASTM D 6226
Water Vapor Transmission - Permeance	21 perms at 1"	ASTM E 96
Air Leakage Rate	< 0.002 (L/s-m ²)	ASTM E 283
Tensile Strength (PSI)	5.19	ASTM D 1623
Dimensional Stability	< 5%	ASTM D 2126
Sound Transmission Coefficient	42	ASTM E 413
Noise Reduction Coefficient	0.75	ASTM C 423

Fire Properties

Property	Value	Test Method
Surface Burning Characteristics • Flame Spread • Smoke Index	Class 1 Pass <25 <450	ASTM E 84
Ignition Barrier	• Pass using DC315 manufactured by International Fireproof Technology, Inc at 4 Wet Mils - 3 Dry Mils	ICC- ES AC377 Appendix X
Thermal Barrier	• Pass using DC315 manufactured by International Fireproof Technology, Inc at (88.88 sq. ft./gal @ 18 mils wet and 12 mils dry) coverage rate of 1.136 gallons (4.3 L) per 100 square feet (9.3 m ²)	NFPA 286

Evaluation Report

Evaluation Report	#ESR-3954	ICC Council
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Storage and Processing Information

Liquid Component Properties

Property	A Side - PMDI	B Side- Thermoseal 500 Hy
Color	Brown	Amber
Viscosity @ 77°F (25°C)	185 - 230 cps	250 - 390 cps
Specific Gravity	1.25	1.14 - 1.19
Storage Temperature	50°F-80°F (10°C-27°C)	50°F-80°F (10°C-27°C)
Mixing Ratio (By Volume)	1:1	1:1
Shelf Life • Of unopened drums stored within specified range	1 Year	180 Days

Recommended Processing Parameters

Recirculation Target	77°F - 90°F	25°C - 32°C
Primary Heater Target (Initial)	129°F	54°C
Primary Hose Target (Initial)	129°F	54°C
Target Processing Pressure	1200 psi	8274 kPa
Substrate & Ambient Temp	>32°F	>0°C
Moisture Content of Substrate	<20%	<20%
Moisture Content of Concrete • Must be clean and free of dust and debris	<10%	<10%

Processing - Application processing temperatures can vary and are dependent upon indoor ambient temperature, outdoor ambient temperature, substrate temperature, humidity, elevation, substrate type, equipment, and other factors. While manufacturing polyurethane foam plastic on site, the applicator must continuously observe the characteristics of the sprayed foam and adjust the processing temperatures and pressures to maintain optimal cell structure, adhesion, and overall foam quality. **It is the sole responsibility of the applicator** to manufacture Thermoseal polyurethane foam plastic on-site within our specifications. When applying Thermoseal, all substrates must be 10°F degrees above the dew point and free of all debris including frost, oil, rust, dust, or other debris. The equipment being used must be set to deliver a consistent 1:1 ratio by volume and must be capable of achieving at least 1200 psi and the target processing temperatures outlined in this manual. To maintain warranty status on all Thermoseal products, the Applicator's Thermoseal Training Certificate must be current. Thermoseal Training is free and can be conducted on our website at <http://www.ThermoSealUSA.com>.

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