TECHNICAL DATA SHEET

Material Specification Criteria | Project Submittal Data

THERMOSEAL™ 2000
Insulation of the Future

Thermoseal 2000

Medium Density • Closed Cell Spray Foam Insulation

ThermoSeal 2000 is a two component, semi-rigid, medium density, 2 lb closed cell polyurethane foam insulation system which simultaneously insulates and air-seals your building structure. Thermoseal 2000 requires the use of an "A" component (ISO) and a blended "B" component (RESIN), which contains ZERO ozone depleting catalysts, polyols and fire retarding materials. ThermoSeal 2000 is designed for residential, commercial, and industrial building applications to make structures more energy efficient, quieter, healthier and more comfortable. ThermoSeal 2000 is applied as a liquid spray and fills all building cavities completely sealing all cracks, crevices, and voids where air loss and infiltration are most common.

Physical Properties

Property	Value	Test Method
R-Value	6.9 @ 1"/21.0 @ 3"	ASTM C 518
Core Density	2.07 LB / Cubic Foot	ASTM D 1622
Closed Cell Content	>= 92%	ASTM D 2586
Water Vapor Transmission - Permeance	Perms: .8 @ 1" / .23 @ 3.5"	ASTM E 96
Air Leakage Rate	Zero (0) ft3/s.ft2 @ 75Pa	ASTM E 283
Compressive Strength (PSI)	25	ASTM D 1621
Tensile Strength (PSI)	60	ASTM D 1623
Dimensional Stability	< 9%	ASTM D 2126
Sound Transmission Coefficient	41	ASTM E-90-85/E 413

Fire Properties

Property	Value	Test Method
Surface Burning Charateristics • Flame Spread / Smoke Index	Class 1 Pass <25 / <450	ASTM E 84
Ignition Barrier	• Complies with the applicable requirements of ICC-ES AC377 Appendix X for use in attics and crawlspaces without a prescriptive ignition barrier.	ICC- ES AC377 Appendix X
Thermal Barrier	• Pass using DC315 manufactured by International Fireproof Technology, Inc at 18 wet mils / 12 Dry Mils • Pass using Fireshell TB manufactured by TPR2, Inc at 26 wet mils / 14 Dry Mils when used as a component in tested alternative thermal barrier assemblies.	NFPA 286 UL 1715
Commercial Fire Tested Wall Assemblies	Compliant in Building Types I, II, III, IV, V	NFPA 285

Building Code Certifications

Evaluation Report	UES-0581	IAPMO
GreenGuard Gold	2013 Standard for Chemical Emmissions for Building Materials	GOLD: UL 2818

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Storage and Proccessing Information

Liquid Component Properties

Property	A Side - PMDI	B Side- Thermoseal 2000
Color	Brown	Amber
Viscosity @ 77˚F (25˚C)	185 - 230 cps	400-520 cps
Specific Gravity	1.25	1.17 - 1.19
Storage Temperature	50˚F-75˚F (10˚C-24˚C)	50˚F-75˚F (10˚C-24˚C)
Mixing Ratio (By Volume)	1:1	1:1
Shelf Life • Of unopened drums stored within specified range	1 Year	18 Months

Recommended Processing Parameters

Recirculation Target	Do not recirculate. Gradually warm drums to 77˚F prior to use.	
Primary Heater Target (Initial)	125˚F	52˚C
Primary Hose Target (Initial)	125˚F	52˚C
Target Processsing Pressure	1200 psi	8274 kPa
Substrate & Ambient Temp	>14˚F (Winter)/ >45 ˚F (Summer)	>-10˚C (Winter)/ >7 ˚C (Summer)
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.