



# SPI ENVELO-SEAL™

ENVIRONMENTALLY FRIENDLY SPRAY FOAM

1.5 - 30 LB CLOSED-CELL ROOFING FOAM INSULATION  
PRELIMINARY

## DESCRIPTION

SPI ENVELO-SEAL™ 1.5 lb to 30 lb density is a two component rigid polyurethane system for sprayed-in-place applications. This foam is low viscosity and is specifically designed for spray operations to produce a rigid foam for tooling, molds, pipelines, roofs, foundations, fish holds, and other commercial/industrial surfaces.

This product has excellent processing characteristics. Good dimensional stability and adhesion to substrate.

## GREEN FEATURES

- No dangerous heavy metal catalysts.
- No ozone depleting products (ODP).
- No bromine or other halogenated components.
- No formaldehyde components.
- Mildew, bacteria, and fungus resistant.
- Contains renewable resource components.
- Consider safe for burial and landfill disposal.
- Compliant with USDA/FDA requirements for incidental food contact.

## TYPICAL PHYSICAL PROPERTIES

Properties for 3.5 lb. density	
<b>R-Value ASTM C518</b>	5.38 initial 4.25 aged
<b>Core Density (nominal) ASTM D1622</b>	3.5 lbs/ft <sup>3</sup>
<b>Color</b>	"A" Amber "B" Clear

## PROCESSING PARAMETERS

<b>PRE-HEATER TEMPERATURE:</b>	"A" and "B" 70 - 90°F
<b>HOSE TEMPERATURE:</b>	"A" and "B" 70 - 90°F
<b>PRESSURES:</b>	50 - 500 psi dynamic
<b>MIX RATIO PARTS:</b>	1 to 1 by volume "A" to "B"
<b>Viscosity at 77°F (25°C):</b>	200 ±50 cPs "A" Component
	500 ± 50 cPs "B" Component

## PRODUCT REACTIVITY

<b>Cream Time</b>	1.5 - 2.0 sec.
<b>Rise Time</b>	3.0 - 3.5 sec.
<b>Tack Free Time</b>	3.5 - 4.0 sec.
<b>Cure Time</b>	4 hours

The samples for tests were sprayed with Gusmer 20/35 @ 1200 psi dynamic pressure primary and hose heat @ 145°F (62°C). Gap Pro gun with 00 chamber.

Note: Adhesion should not be tested within one hour of application

## PACKAGING

This product sold in standard 100 gallon drum and 500 gallon tote sets. Available in other container sizes, contact sales representative for further information. Non-standard containers may require a longer lead time.

## PROCESSING EQUIPMENT

- Lock 'n Load™ gun with 7-40 mixer.
- Product and hose temperature “A” component 75°F.
- “B” component 70° - 90°F.
- 50 – 500 psi.
- Standard 1:1 ratio, LPG™ equipment developing a minimum of 150 - 500 psi (.3 - 3.4 mpa) dynamic pressure with heating capabilities to 150°F (66°C) will adequately spray this product. Gun models include Fusion AP and LOCK N LOAD gun. Pre-heater temperature should be a minimum of 140° – 150°F (62° – 68°C).
- Substrate temperature should be a minimum of 50°F (10°C).

## PRODUCT LIMITATIONS

- This product is for professional use only.
- Minimum material/container temperature for spray application is 70°F (21°C).
- This product has not been tested for flame spread or smoke development.
- Not to be installed within two inches (2”) of heat emitting devices, where temperature is in excess of two-hundred degrees (200°F).

## PER PASS LIMITATIONS

When spraying ENVELO-SEAL™, pass thickness should be limited to 1.5” per pass, for optimal physical properties. If subsequent passes are needed, applicators should wait 10 minutes or longer between passes to allow reaction heat to dissipate. The exotherm reaction can cause temporary substrate thermal rise in excess of 150°F, which may result in substrate thermal expansion. If the substrate then contract when the reaction heat dissipates, substrate deformation can occur.

## GENERAL SAFETY, TOXICITY & HEALTH

Safety Data Sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the S.D.S. **CHEMTREC EMERGENCY NUMBER 1-800-424-9300 INT’L 1-703-527-3887.**

**WARNING:** Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact with the liquid or spray mist. Hypersensitive persons should wear protective clothes, gloves and use protective cream on face, hands and exposed areas.

**CLEAN UP:** Use DPM, NMP, and Polyclean.

**EYE PROTECTION:** Safety eye wear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield.

**SKIN PROTECTION:** Personal protective equipment for the body should be selected based on the task being performed; the risks involved, and should be approved by an industrial hygiene specialist before handling this product. Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

**RESPIRATORY PROTECTION:** Harmful if inhaled and may cause allergy or asthma symptoms. Use a respirator approved for isocyanates and organic vapors. If you are not sure, or not able to monitor levels, or if you are spraying in an enclosed/indoor area, use MSHA/NIOSH approved supplied air respirator. Consider the application and environmental concentrations when deciding if additional protective measures are necessary.

**INGESTION:** Do not take internally. It is believed that ingestion of polymeric isocyanates would not be fatal to humans, but may cause inflammation of mouth and stomach tissue.

**CONTAMINATION:** Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected, carbon dioxide created pressure can develop. Do not attempt to use contaminated material.

## WARRANTY & DISCLAIMER

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**SPI The Single Source Solution Since 1974**  
**Serving the Plural-Component Industry**

**Product & Equipment Technical Assistance**  
**24 hours - 7 days a week 800 627 0773**

### **CONTACT US**

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