



# SPI ENVELO-SEAL™ 2.7 HDS

High Dimensional Stability, Closed-Cell Insulation

Preliminary  
Revised 11.07.13

## DESCRIPTION

SPI ENVELO-SEAL™ 2.7 HDS is a two- component, closed cell polyurethane system for sprayed-in-place applications. This foam is low viscosity and is specifically designed for high dimensional stability foam for tooling, molds, pipelines, roofs, foundations, fish holds, and other commercial/industrial surfaces.

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

This product is sold in 100 gallon drum sets and 500 gallon tote sets.

## GREEN FEATURES

- **No Dangerous Heavy Metal Catalysts (such as lead or mercury)**
- **No Ozone Depleting Products (ODP)**
- **No Bromine or Other Halogenated Components**
- **No Formaldehyde Components**
- **Mildew, Bacteria and Fungus Resistant**
- **Contains Renewable Resource Components**
- **Considered Safe for Burial and Landfill Disposal**
- **Compliant with USDA/FDA Requirements for Incidental Food Contact**

## PHYSICAL & MECHANICAL PROPERTIES (3.5 lb)

PROPERTY	"A" SIDE (ISOCYANATE)	"B" SIDE (RESIN)
<b>Color</b>	Amber	Light Yellow
<b>Viscosity @ 77°F (25°C)</b>	200 ± 50 cps	950 ± 100 cps
<b>Shelf Life (unopened)</b>	* 1 year 60°F – 90°F (15°C – 27°C)	* 6 months (60°F – 90°F) (15°C – 27°C)
<b>Mixing Ratio(Volume)</b>	1:1	
<b>Core Density</b>	2.5	

\*When continuously stored and maintained at above temperatures

## PRODUCT REACTIVITY @77°F (25°C)

Cream Time	1.5 – 2.0 sec
Rise Time	4.0 – 5.0 sec
Tack Free time	4.0 – 5.0 sec
Cure time	4 hrs

The samples for tests were sprayed with Gusmer 20/35 @ 1200 psi dynamic pressure primary and hose heat @ 135°F (57°C). Fusion Air Purge gun with 37/37 chamber.

## PRODUCT LIMITATIONS

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

For optimal physical properties, foam made with ENVELO-SEAL™ 2.7 HDS, pass thickness should be limited to 1.5" per pass. 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 expansion. If the substrate then contracts when the reaction heat dissipates, substrate deformation can occur.

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SPI Manufacturing/Distribution Locations: Lakewood, WA · Rowlett, TX · Anchorage, AK

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## RECOMMENDED EQUIPMENT / SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 1200psi (8.34mpa) dynamic pressure with heating capabilities to 150°F (66°C) will adequately spray this product. These include Graco 20/35, 20/35 Pro, H-2000, H-3500, HV-20/35, Reactor A-20, E-20, E-30, E-XP1, E-XP2, H-25, H-40, H-XP2, H-XP3, SPI 18/18 and SPI Gusmer 25/25. Gun models include Fusion AP, MP, Gap Pro, D Gun, Gusmer D7, GX-7 DI, GX-7-400, GX-8 Pro, SPI D-7, Fusion CS, and Model D gun. Pre-heater temperature should be a minimum of 125°F – 150°F (52°C – 60°C).
- Hose temperature should be 125°F – 150°F (52°C – 60°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 105°F (40°C).
- Substrate temperature should be a minimum of 50°F (10°C).

## GENERAL SAFETY, TOXICITY & HEALTH DATA

Material Safety Data Sheets are available for the Polyurethane Foam. Any individual who may come in contact with these products should read and understand the M.S.D.S. **CHEMTREC EMERGENCY NUMBER 1-800-424-9300**

**NOTE:** Polyurethane Foam products under certain conditions may present a significant fire hazard. The potential for such hazard depends upon a broad range of factors influenced by the manufacturer or user of the product. Any person or firm engaged in the use of Polyurethane Foam materials should carefully determine the potential for fire in their processes and use all precautions outlined by local, state, and federal regulations.

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

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

**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.

**EYE PROTECTION:** Safety glasses, goggles, or a face shield are recommended.

**SKIN PROTECTION:** Chemical resistant gloves are recommended. Cover as much of the exposed skin area as possible with appropriate clothing.

**RESPIRATORY PROTECTION:** 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 in 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.

## LIMITATIONS

- This product is for professional use only.
- Minimum material/container temperature for spray application is 70°F (21°C).
- Avoid moisture contamination in containers. Containers should not be resealed. If contamination is suspected, CO<sub>2</sub> created pressure can develop. Do not attempt to use contaminated material.

## WARRANTY & DISCLAIMER

Specialty Products, Inc. has no role in the manufacture of the finished Specialty Products, Inc. has no role in the manufacture of the finished polymer other than to supply its two components. It is vital that the person applying this product understands the product, and is fully trained and certified in the use of plural-component equipment.

Specialty Products, Inc., an Alaska corporation, warrants only that the two components of this product shall conform to the technical specifications published in the product literature.

The quality and fitness of the product are dependent upon the proper mixture and application of the components by the applicator. There are no warranties that extend beyond the description on the face of this instrument.

**Failure to apply the product within the parameters stated on this document shall void the warranty.**

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The data presented herein is intended for professional applicators or those persons who purchase or utilize this product in the normal course of their business.

The potential user must perform any pertinent tests in order to determine the product's performance and suitability in the intended application, since final determination of fitness of the product for any particular use is the responsibility of the buyer.

The aforementioned data on this product is to be used as a guide and is subject to change without notice.

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