

DESCRIPTION

SPI's patented PTU™ 100% pure polyurea is a new generation of high-performance polyurea coating and is the result of six years of development and field testing. This chemical resistant coating provides high-ductility, allowing it to move with expanding and contracting surfaces. PTU™ can be sprayed to any thickness in one application and returned to service in a matter of hours.

FEATURES

- An elastomer with chemical resistance; comparable to many epoxies.
- Self-priming in most instances, with strong adhesion.
- Return to service within hours not days (foot traffic 1 hour, vehicle traffic 4 hours).
- Typically applied in a single 'multi-pass' application.
- Eco-friendly, 100% solids, and no VOCs.

RECOMMENDED USES

- Primary and secondary containment.
- Steel tanks, concrete tanks, and silos.
- Barge and ship holds.
- Oil and gas pipelines.
- Waste water treatment facilities.
- Chemical transportation.
- Industrial flooring.
- Pulp and paper industry.
- Asbestos and lead encapsulation.

COLORS

PTU™ is available in SPI standard colors (Sand, Medium Grey, and Black). Custom colors will be quoted upon request. It should be noted that PTU™ is an aromatic polyurea; therefore, as with all aromatics, color change and superficial oxidation will occur.

PACKAGING

This product sold in standard 110 gallon drum and 550 gallon tote sets. Available in other container sizes, contact sales representative for further information. Non-standard containers may require a longer lead time.

DRY PROPERTIES*

Tensile Strength ASTM D638	± 3,000 psi (21 mpa)
Elongation ASTM D638	± 100%
Hardness (Shore D) ASTM D2240-81	65 ± 5
Permeance ASTM D96-80	Perms-inch 0.007
Exposure Temperature**	-40° - +200°F (-45° - +93°C)

CURING SCHEDULE

Gel	± 4 sec
Tack Free	± 10 sec
Post Cure***	12 - 24 hour
Recoat	0 min - 6 hours

* All cured film properties are approximate since processing parameter, ad-mixture types, and quantities change physical properties of the cured elastomer. Elevated temperatures will accelerate the curing process and shorten the re-coat window.

** Test performed in a dry, static environment.

*** Complete polymerization to achieve final strength can take up to several days or weeks, depending on a variety of conditions or product type. All samples for above tests were force cured 48 hours or aged for more than three weeks. It is recommended that the user perform their own independent testing. The samples for tests were sprayed with Graco HXP3P @ 2700 psi dynamic. Primaries/Hose Heat 170°F (77°C,) MP Fusion gun with 29/29 40 mixing chamber and .040 ceramtip. Test results from SPI.

Note: Currently, this product is manufactured exclusively in our Lakewood, Washington facility. Therefore, please allow additional transit time and additional transportation charges to certain geographic areas.

WET PROPERTIES

Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs/gal (0 g/l)
Theoretical Coverage DFT	100 sq. ft. @ 16 mils/gal
Weight per gallon (approx)	9.6 lbs. (4.35 kg)
Number of coats	1 or more
Mix Ratio	1 "A" : 1 "B"
Viscosity @77°F (25°C)	A: 650 ± 50 cPs B: 750 ± 50 cPs B @ 90°F 700 cPs
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	6 Months

Minimum material/container temperature for application is 70°F (21°C).

TEST INFORMATION

Mandrel Bend Test ASTM D522-93a	Passed	Mandrel Size 1" Test Temp - 40°F (-40°C)
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IMMERSION

CHEMICAL	WEIGHT GAIN %	
Acetic 50%	9.75%	11 months
Diesel	0.1%	3 years
Gasoline (unleaded)	4.75%	17 months
Sulphuric Acid 14% Phosphoric Acid 30%	-0.86%	2 years
Jet Fuel JP-1,2,3	1.4%	5 years
Methanol	9.12%	19 months
Skydrol	16.5%	1 year
Sulphuric Acid 50%	6.15%	1 year

Immersion samples were 'free films' (6 sides exposed). In service, containment liners have only one side of liner exposed to reagents. To calculate approximate chemical absorption, divide the weight gain percentage indicated on the adjacent chart by two. All tests performed at SPI location at room temperature. Certified free film samples are available for immersion evaluation.

MIXING & THINNING

Thoroughly agitate the "B" components of this product prior to application. Use a SPI folding blade mixer, or equivalent equipment approved by SPI. Install mixer through the extra air specific 2" bung hole provided on all "B" drums. Care must be taken not to cross contaminate the individual components with the mixing equipment; for best mixing results, supply the SPI mixer with 25 cfm of air at 100 psi. Thinning is not required. Using any thinner may adversely affect product performance.

GENERAL APPLICATION INSTRUCTIONS

Apply PTU™ only to clean, dry, sound surfaces free of loose particles or other foreign matter. PTU™ can be sprayed over a broad range of ambient and substrate temperatures.

It is recommended that PTU™ be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness.

Follow the instructions attached to "A" and "B" containers.

Contact technical service personnel for specific recommendations and pricing. As well as the availability of spray and auxiliary equipment.

PROCESSING EQUIPMENT & SETTINGS

MACHINES:

GRACO (Gusmer, Glass-craft)	<ul style="list-style-type: none"> A-XP1 E-10 HP E-XP1 E-XP2 H-20/35 Pro H-3500 HV 20/35 	<ul style="list-style-type: none"> H-XP2 H-XP3 Reactor2 E-XP2 Reactor2 E-XP2i Reactor2 H-XP2 Reactor2 H-XP3
PMC	<ul style="list-style-type: none"> PAX-25 PHX-2 PHX-25 	<ul style="list-style-type: none"> PHX-40 PMCA-20

GUNS:

GRACO (Gusmer, Glass-craft)	<ul style="list-style-type: none"> Fusion MP GAP Pro GX7-DI GX-8 Pro 	<ul style="list-style-type: none"> GX7-400 P2 P2 Elite P2 Elite "C" D7
PMC	<ul style="list-style-type: none"> AP-2 	
SPRAY FOAM EQUIP & MFG	<ul style="list-style-type: none"> Boss 	

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2500 psi (17.24 mpa) dynamic pressure will adequately spray PTU™. Other application equipment may be acceptable depending on product and application. Contact SPI technical service for specifics.
- Machines capable of producing a higher dynamic psi may be required depending on the service environment the PTU™ will be exposed to. Consult SPI technical service personnel for additional information.
- Primary heater temperature should be at 160-170°F (71-77°C).
- Hose temperature should be at 160-170°F (71-77°C). A hose thermometer inserted under the insulation near the gun
- Physical properties will be enhanced when sprayed at higher pressure (3000 psi or more), utilizing an impingement mix gun such as MP Fusion or GX7-DI gun.

If you own a machine that is not listed above please contact your SPI representative for information and instructions.

LIMITATIONS

- PTU™ is for professional use only.
- PTU™ must be stored at temperatures between 60–90°F (15–32°C).
- Liquid temperature in containers/drums during application 70–100°F (21–38°C).
- Apply PTU™ when surface and air temperatures are above 40°F (5°C) and the surface temperature is at least 5°F (3°C) above dew point and rising.
- 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. CO₂ created pressure can develop. Do not attempt to use contaminated material.
- Undried air exposed to liquid components will reduce physical properties of the cured coating.

Note: The material supplied is a two component system (component “A”/component “B”, which is used to formulate this product. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components by the person applying the polymers.

For the most up to date technical data sheet and/or safety data sheet visit our website at www.specialty-products.com.

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**

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 or NMP.

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 complying with applicable health and safety standards shall be worn when handling this product. Cover as much of the exposed skin area as possible with appropriate clothing. Refer to safety data sheet (SDS).

RESPIRATORY PROTECTION: Harmful if inhaled and may cause allergy or asthma symptoms. Ensure adequate ventilation. If the respirator is the sole means of protection, use a full-face supplied respirator. Use respirators and components tested and approved under appropriate

government standards such as OSHA 29CFR 1910.134, NIOSH (US), or CEN (EU). 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.



SEAMLESS SOLUTIONS FOR OVER 40 YEARS



WARRANTY & DISCLAIMER

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. SPECIALTY PRODUCTS, INC. MAKES NO WARRANTY OF MERCHANTABILITY OF THE PRODUCT OR OF FITNESS OF THE PRODUCT FOR ANY PARTICULAR PURPOSE. Specialty Products, Inc. makes no warranty as to the quality of any product modified, supplemented, tinted, or altered in any way after it leaves the manufacturing plant. Specialty Products, Inc. does not warrant that this product is suitable for use as a liner for potable water containers. Use of this product in a potable water container could be hazardous to health if it is improperly processed or applied. The liability of Specialty Products, Inc. for any nonconformity of the product to its technical specifications shall be limited to replacement of the product. The sole exclusive remedy of buyer, which is to have Specialty Products, Inc. replace any nonconforming product at no cost to buyer, is conditioned upon buyer notifying Specialty Products, Inc. or its distributor in writing of such defect within thirty days of the discovery of such defect. Specialty Products, Inc. shall not be liable for any direct, incidental, or consequential damages resulting from any breach of warranty. 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. The information herein is believed to be reliable, but unknown risks may be present. Specialty Products, Inc. makes no warranties, expressed or implied, including patent warranties or warranties of merchantability or fitness of use, with respect to products or information set forth herein. Nothing contained herein shall constitute permission or recommendation to practice any invention covered by a patent without a license from the owner of the patent. Accordingly, the buyer assumes all risks whatsoever as to the use of these materials and buyer's exclusive remedy as to any breach of warranty, negligence, or other claim shall be limited to the purchase price of the materials. Failure to adhere to any recommended procedures shall relieve Specialty Products, Inc. of all liability with respect to the materials and the use thereof.

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Product & Equipment Technical Assistance
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SPI Media



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