

DESCRIPTION

POLYSHIELD SIPP™ 122 is a high flexural modulus, thermoset spray-applied, plural-component, pure polyurea elastomer with ANSI/NSF 61 approval. This product is an economical polyurea that exhibits superior rigidity, and high impact resistance. It forms a seamless, monolithic membrane with good water and chemical resistance.

FEATURES

POTABLE WATER FEATURES:

- ANSI/NSF 61 Approved for Potable Water.
- 100% solids, no solvents, and zero VOCs.
- No toxic vapors.
- Compliant with FDA/USDA for incidental food contact.
- Liquid components can be shipped non-hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

SIPP FEATURES:

- Hydrophobic, and therefore affected very little by damp, cool surfaces during application. It can be built up to any thickness in one application.
- High temperature stability to 200°F (93°C) with intermittent temperatures to 300°F (148°C).
- Sprayed product results in a smooth glossy surface to reduce filling and sanding.
- High impact resistance.
- Excellent waterproofing characteristics.

RECOMMENDED USES

- Spray in-place pipe (SIPP).
- Meets AWWA class 2 and 3 for pipelines.

COLORS

POLYSHIELD SIPP™ 122 is available in SPI Light Grey. Custom colors available upon request. Note: POLYSHIELD SIPP™ 122 is an aromatic polyurea. Therefore, with all aromatics, color change and superficial oxidation will occur. Aliphatic urethane and other suitable topcoats can be used where long-term color stability and increased longevity in full sun exposure are of critical importance.

DRY PROPERTIES*

@ 63 mils (1.66 mm)	
Tensile Strength ASTM D 638	± 4,000 psi (28 mpa)
Elongation ASTM D638	± 200%
Hardness (Shore D) ASTM D2240-81	60 ± 5
Service Temperature	-50° - +200°F (-45° - +93°C)

*All cured film properties are approximate since processing parameter, ad-mixture types, and quantities change physical properties of the cured elastomer.

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.

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.

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.)	8.9 lbs. (4.04 kg)
Number of coats	1 or more
Mix Ratio	1 "A" : 1 "B"
Viscosity (cps) @77°F (25°C)	A: 950 ± 50 cps B: 1,600 ± 200 cps
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	Six Months

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

CURING SCHEDULE

Gel	± 3 - 4 sec
Tack Free	± 8 sec
Post Cure**	24 hour
Recoat	0 min - 4 hours

**Complete polymerization to achieve final strength can take up to several days or weeks, depending on a variety of conditions or product type.

The samples for tests were sprayed with Graco HXP3 @ 2500 psi dynamic (17 mpa). Primaries/Hose Heat 170°F (77°C,) MP Fusion gun with 29/29 40 mixing chamber. Test results from SPI.

TEST INFORMATION

Potable Water Certification US ANSI/NSF-61	Passed	
Mandrel Bend Test ASTM D633-93a	Passed	Mandrel Size 1" Test Temp -60°F (-51°C)

MIXING & THINNING

The polyol "B" component must be thoroughly power mixed each day, prior to use. Care must be taken not to cross contaminate the individual components with the mixing equipment. Thinning is not required. Using any thinner may adversely affect product performance.

GENERAL APPLICATION INSTRUCTIONS

Apply POLYSHIELD SIPP™ 122 to only clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required; subject to type and condition of the substrate. Consult technical service for specific primer, temperature and mixing equipment recommendations.

RECOMMENDED EQUIPMENT SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2500 psi (17 mpa) dynamic pressure will adequately spray POLYSHIELD SIPP™ 122. These include Reactor HXP3, HXP2, EXP2, H-25, Graco 20/35, 20/35 Pro, H-3500, HV-20/35, PMC GH-25, GH-40, PHX-25, and PXH-40. Gun models include Graco Fusion MP, Gap Pro, Glass Craft P2, P2 Elite, P2 Elite "C", GX7-DI, and GX-8 Pro. Other application equipment may be acceptable depending on product and application. Contact SPI technical service for specifics.
- Pre-heater temperature should be at 160-170°F (71-76°C).
- Hose temperature should be at 160-170°F (71-76°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 145-155°F (63-68°C).
- 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

LIMITATIONS

This product is for professional use only.

This product must be stored at temperatures between 60° - 90°F (15° - 30°C).

Apply POLYSHIELD SIPP™ 122 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.

Liquid temperature in drums during application 70° F (21 °C) – 100°F (38°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.

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.

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, 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.

WARRANTY & DISCLAIMER

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