

DESCRIPTION

HARD CAP™ 100 spray-applied, plural-component polyurea is an ideal choice when a durable high build coating for interior and exterior applications with excellent color stability and gloss retention is required. HARD CAP™ 100 provides a flexible, resilient, tough, monolithic membrane with good water and chemical resistance.

FEATURES

- 100% solids, no solvents, and zero VOCs.
- Extended tack time to allow deep surface penetration as well as a smooth, uniform finish.
- High dry temperature stability with a dry working temperature up to 200°F (93°C).
- Compliant with FDA/USDA for incidental food contact.
- HARD CAP™ 100 can be applied by several methods. These include, heated plural-spray, in line static mix spray, external static mix pour, or brushed.
- HARD CAP™ 100 is available with and adhesion enhancing ad-mixture for additional adhesion to inorganic surfaces such as glass, ferrous metals, concrete, etc. Contact a SPI technical service person for specifics.
- HARD CAP™ 100 is also available with a microbial resistant additive to minimize mold/mildew growth.

RECOMMENDED USES

- A hard washable coating for floors, walls, ceiling, etc. in food and beverage processing facilities.
- For institutional applications such as clean rooms, hospitals, etc. where an easily cleanable seamless surface is required.
- Fountains, reflection pools, and aquariums.
- Stop erosion on concrete, brick or stone while retaining its natural look.
- Apply to metal or concrete structures such as bridges and towers, to facilitate visual inspection for structural integrity.
- Preserve archaeological artifacts.

COLORS

HARD CAP™ 100 is available in White and Clear. Custom colors available upon request.

DRY PROPERTIES*

@ 60 mils (1.52 mm)	
Tensile Strength ASTM D 638	± 2,300 psi (16 mPa)
Elongation ASTM D638	± 68%
Hardness (Shore A) ASTM D2240	98 ± 5
Hardness (Shore D) ASTM D2240	65 ± 5
Moisture Vapor Transmission ASTM E96-80	0.018
Tear Resistance ASTM D624	519 PLI (91 KN/m)
Service Temperature	-30° - +200°F (-1° - +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.

CURING SCHEDULE

Gel	1:35 min
Tack Free	45 min
Post Cure**	24 hour
Recoat	30 min - 12 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 SPI Gusmer 18/18 @ 1300 psi dynamic (9 mpa). Primaries/Hose Heat 160°F (71°C), D-7 gun with 46 mixing chamber. Test results from Huntsman Corporation.

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.)	8.8 lbs. (4 kg)
Number of coats	1 or more
Mix Ratio	1 "A" : 1 "B"
Viscosity @77°F (25°C)	A: 1000 ± 200 cPs. B: 450 ± 50 cPs.
Shelf Life Unopened Containers @ 60 - 90°F (15 - 32°C)	Six Months

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

MIXING & THINNING

Thoroughly agitate the "B" component of this product prior to application. Use a SPI folding blade mixer, or equivalent equipment approved by SPI. Install mixer through the extra 2" bung hole provided on all "B" drums. 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 HARD CAP™ 100 to only clean, dry, sound surfaces free of loose particles or other foreign matter. HARD CAP™ 100 can be sprayed over a broad range of ambient temperatures. Consult technical service for specific recommendations. It is recommended that HARD CAP™ 100 be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness. The polyol "B" component must be thoroughly power mixed each day, prior to use. 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 HARD CAP™ 100. 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 HARD CAP™ 100 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 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.

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 under the condition that the buyer notifies 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

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