



# Hard Cap-100™

## CLEAR ALIPHATIC POLYUREA

Revised 07.14.11

### DESCRIPTION

HARD CAP-100™ is a 100% solids (0 VOCs) 1:1 ratio plural aliphatic polyurea. It is available in White and several standard colors,\* as well as clear.

HARD CAP-100™ is an ideal choice when a durable high build coating for interior or 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.

\*Custom colors available upon request.

### FEATURES

- 100% solids. No solvents. No VOCs.
- Extended tack time to allow deep surface penetration as well as a smooth uniform finish.
- High temperature stability up to 200°F (93°C).
- Qualifies for USDA incidental food contact applications.
- 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 an adhesion enhancing admixture 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, ceilings, etc. in food and beverage processing facilities. (qualifies for USDA incidental food contact)
- For institutional applications such as clean rooms, hospitals, etc. where an easily cleanable seamless surface is required.
- Fountains, reflection pools and aquariums.

### OTHER USES REQUIRING A CLEAR FINISH

- 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.



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### WET PROPERTIES @ 77°F (25°C)

<b>Solids by Volume</b>	100%
<b>Solids by Weight</b>	100%
<b>Volatile Organic Compounds</b>	0 lbs/gal (0g/l)
<b>Theoretical Coverage DFT</b>	100 sq. ft. @ 16 mils/gal
<b>Weight per gallon (approx)</b>	8.55 lbs (3.87 kg)
<b>Number of Coats</b>	1-2
<b>Mix Ratio</b>	1 "A": 1 "B"
<b>Viscosity (cps) @ 77° F (25° C)</b>	A: 1200 approx. B: 600 approx.
<b>Shelf Life Unopened Containers @ 60-90°F (15° - 32°C)</b>	Six months

### DRY PROPERTIES @ 55 mils (1.5mm)\*

<b>Tensile Strength</b> ASTM D 638	1835 psi (12.7 mpa) Average
<b>Elongation</b> ASTM D 638	47% Average
<b>Hardness (Shore A)</b> ASTM D2240-81	(0s) 98
<b>Hardness (Shore D)</b> ASTM D2240-81	(0s) 55
<b>Tear Resistance</b> ASTM D 624	365 pli ( 63 KN/m) Average
<b>Service Temperature</b>	-30°F - +200°F -1°C - +93°C
<b>Moisture Vapor Transmission</b> ASTM E-96-80	0.018

*\*All dry film properties are approximate since processing parameters, ad-mixture types, and quantities change physical properties of the cured elastomer. All samples for above tests were force cured 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 SPI-Gusmer 18/18 @ 1300 psi (9.0mpa) dynamic pressure. Primaries/Hose Heat 160°F (71°C) D-7 Gun w/#46 mixing chamber. Test results from Huntsman Corporation*

### CURING SCHEDULE @ 70°F (21°C)

Pot Life	20± min.
Gel	25± min.
Tack Free	1 hour & 15± min.
Post Cure**	24 hours
Recoat	30 min. – 12 hours

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

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

Product & Equipment Technical Assistance  
24 hours / 7 days a week (800) 627-0773

## GENERAL APPLICATION INSTRUCTIONS

Apply HARD CAP-100™ only to clean, dry, sound surfaces free of loose particles or other foreign matter. A primer may be required, subject to type and/or condition of the substrate.

Consult technical service personnel for specific primer recommendations and substrate preparation procedures.

HARD CAP-100™ can be sprayed over a broad range of ambient temperatures. Contact technical service personnel for specific recommendations, pricing, and availability of spray and auxiliary equipment.

It is recommended that HARD CAP-100™ be sprayed in multi-directional (north-south/east-west) passes to ensure uniform thickness.

If HARD CAP-100™ is to be brushed or troweled do not mix more than what can be used in 20 minutes.

## RECOMMENDED EQUIPMENT AND SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 1500psi (10.4 mpa) dynamic pressure with heating capabilities to 175° F (79°C) will adequately spray HARD CAP-100™. These include Gusmer 20/35, Graco EXP2, HXP2, and HXP3. Gun models include a GX7-400 gun, GX8 or Graco MP Fusion gun.
- Pre-heater temperature should be at 160°F (71°C).
- Hose temperature should be at 160°F (71°C). A hose thermometer inserted under the insulation near the gun should read a minimum of 145°F (62°C).
- A SPI static mix adapter with airless tip is recommended to enhance physical properties.

## MIXING AND THINNING

Thinning is not required and may adversely affect product performance.

## LIMITATIONS

- This product is for professional use only.
- Apply HARD CAP-100™ when surface and air temperatures are above 40°F (5°C) and rising, and 7°F (3°C) above dew point.
- Minimum material/container temperature for spray application is 70° (27 °C).
- Liquid temperature in drums during application 70° F (21 °C) – 100°F (38°C).

## GENERAL SAFETY, TOXICITY & HEALTH DATA

Material safety data sheets are available for this coating material. Any individual who may come in contact with these products should read and understand the M.S.D.S.

**WARNING:** Contact with skin or inhalation of vapors may cause an allergic reaction. Avoid eye contact of 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, Polyclean.

**CHEMTREC EMERGENCY NUMBER 1-800-424-9300**

**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 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's vital that the person processing 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.

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