



HARC™

HIGH ABRASION RESISTANT COATING

Preliminary
Revised 02.24.14

DESCRIPTION

HARC™ is a state-of-the-art, high-performance, spray-applied, plural-component, pure polyurea elastomer. This system is based on amine-terminated polyether resins, amine chain extenders, and MDI prepolymers. It provides a flexible, resilient, tough, monolithic membrane with superior abrasion resistance.

FEATURES

- 100% solids. No solvents. No VOCs.
- Fast-set: Handle in two minutes or less.
- Protects and extends the service life of assets.
- Tolerates freeze thaw cycles .
- Reduces vibration.
- Impact absorbing.
- High abrasion resistance.

RECOMMENDED USES

- Coating for steel or other substrates exposed to a corrosive environment.
- Protective barrier for highly abrasive environments:
- Waterproofing for concrete tanks, ponds, lagoons, reservoirs, dikes, irrigation ditches, tunnels, barges, etc.
- Protective lining for cargo containers.
- Steel tanks, silos, pipes, dump truck beds, earth moving, and mining equipment
- Replace or repair failed existing sheet membrane liners

COLORS

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

Aliphatic urethane, polyurea, and other suitable aliphatic topcoats can be used when long-term color stability and increased longevity in full sun exposure are of critical importance.

WET PROPERTIES @ 77°F (25°C)

Solids by Volume	100%
Solids by Weight	100%
Volatile Organic Compounds	0 lbs/gal (0g/l)
Theoretical Coverage DFT	100 sq. ft. @ 16 mils/gal
Weight per gallon (approx.)	8.5 lbs. (3.85 kg)
Number of Coats	1-2
Mix Ratio	1 "A": 1 "B"
Viscosity (cps) @ 77° F (25 °C)	A: 800 approx. B: 550 approx.
Shelf Life Unopened Containers @ 60-90°F (15-32°C)	Six months

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

DRY PROPERTIES* @ 70 mils (1.77 mm)*

Tensile Strength ASTM D 638	±4600 psi (31.97 mpa) Avg
Elongation @ 77°F (25°C)	±350% Average
Hardness (Shore A) ASTM D 2240	±95 (0s)
Hardness (Shore D) ASTM D 2240	±55 (0s)

CURING SCHEDULE

Gel	5 sec.
Tack Free	10 sec.
Post Cure**	24 hours
Recoat	0 min. - 8 hours

**All cured film properties are approximate since processing parameters, ad-mixture types, and quantities will change physical properties of the cured elastomer. All samples for the 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 20/35 HP @ 2500 psi dynamic (172 bar). Primaries/Hose Heat 170°F (77°C) MP Fusion with 29/29 mixing chamber. Test results from Huntsman Corporation.*

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

GENERAL APPLICATION INSTRUCTIONS

Apply HARC™ 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.

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

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

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The polyol "B" component must be thoroughly power mixed each day, prior to use. Contact a SPI technician regarding proper mixing equipment.

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

RECOMMENDED EQUIPMENT AND SETTINGS

- Standard 1:1 ratio, heated, plural-component equipment developing a minimum of 2000 psi (13.9 mpa) dynamic pressure with heating capabilities to 175°F (79°C) will adequately spray this product. These include PMC GH-25, Gh-40, PHX-25, PHX-40, Graco Reactor E-XP1, E-XP2, H-XP2, and H-XP3. Gun models include Fusion MP, Gap Pro, GX7-DI, and GX-8 Pro.
- 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) (20.7 mpa), utilizing an impingement mix gun such as a MP Fusion or GX7-DI.

MIXING AND 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 SAFETY, TOXICITY & HEALTH DATA

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. **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.

CONTAMINATION: Avoid moisture contamination in containers. Containers should not be resealed if contamination is suspected as 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 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.

LIMITATIONS

- This product is for professional use only.
- Minimum material/container temperature for spray application is 70° F (27° C).
- Liquid temperature in drums during application 70°F (21°C) – 100°F (38°C).
- Apply HARC™ when surface and air temperatures are above 40°F (5°C) and rising, and 7°F above dew point.
- 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 two components (Component "A"/Component "B") used to formulate HARC™. The quality and characteristics of the finished polymer is determined by the mixture and application of the two components.

WARRANTY & DISCLAIMERS

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.

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