

PRODUCT DATA SHEET

Sikagard[®]-170 CR

(formerly MasterProtect[®] 170CR)

EPOXY COATING WITH 98% SULFURIC-ACID RESISTANCE

PRODUCT DESCRIPTION

Sikagard[®]-170 CR is a high-build, 100% solids epoxy coating. It provides resistance to harsh chemicals, including 98% sulfuric acid, and can be used as a topcoat over epoxy and polyurethane coatings.

USES

- Horizontal and vertical
- Chemical-resistant industrial flooring
- Primary containment of water and wastewater
- Secondary containment of many chemicals
- Floors, gutters, and troughs
- Manholes, wet wells, and lift stations
- Walls
- Wastewater treatment plants
- Pulp and paper mills
- Metal-treatment plants
- Battery storage areas
- Production areas
- Food-processing plants
- Waste areas

CHARACTERISTICS / ADVANTAGES

- Hard-wearing surface for durable, low-maintenance flooring.
- Chemical resistant for excellent resistance to sulfuric acid and a wide range of industrial chemicals.
- 100% solids system for solvent-free and nearly odor-free application.
- Liquid applied for seamless protection of concrete.
- Usable with aggregate broadcast for a slip-resistant floor finish.

PRODUCT INFORMATION

Chemical Base	Sikagard [®] -170 CR is a 100% solids Novolac Epoxy
Packaging	3 Gal (11.4 L) Kit: <ul style="list-style-type: none"> ▪ Part A: Two 1 Gal (3.8 L) Pails (Pigmented) ▪ Part B: 1 Gal (3.8 L) Pail (Clear) Kit - 14.3 Gallon - 3 (5 Gallon Container Pails) <ul style="list-style-type: none"> ▪ Part A: Two- 5 Gal (18.9 L) Pails ▪ Part B: One- 5 Gal (18.9 L) Pail
Shelf Life	2 years when properly stored

Storage Conditions	Store and transport in unopened containers in a cool, clean, dry area. Keep from freezing.	
Color	Gray	
Viscosity	Mixed Viscosity 4,000 cps at 75° F (24° C)	(ASTM D 2393)

TECHNICAL INFORMATION

Shore D Hardness	80–82	(ASTM D 2240)
Abrasion Resistance	40 L/mil coating	(ASTM D 968)
Compressive Strength	14,300 psi (99 MPa)	(ASTM D 695)
Tensile Strength	5,700 psi (39 MPa)	(ASTM D 638)
Elongation at Break	Tensile Elongation at Break 3–4% cured 7 days at 75° F (24° C)	(ASTM D 638)
Slant Shear Strength	2,640 psi (18.2 MPa), 100% concrete failure after 14-day moist cure	(ASTM C 882)

Chemical Resistance	Chemical	Results
	Hydrochloric acid, 50%	Regular contact
	Hydrofluoric acid, 50%	Regular contact
	Nitric acid, 25%	Occasional contact
	Sulfuric acid, 10%	Regular contact
	Sulfuric acid, 25%	Regular contact
	Sulfuric acid, 50%	Regular contact
	Sulfuric acid, 98%	Regular contact
	Phosphoric acid, 50%	Regular contact
	Acetic acid, 10%	Regular contact
	Sodium hydroxide, 50%	Regular contact
	Ammonia, 10%	Regular contact
	Bleach concentrate	Regular contact
	Bleach, 5%	Regular contact
	Urea (saturated)	Regular contact
	Sugar (saturated)	Regular contact
	Sodium chloride (saturated)	Regular contact
	Methanol	Regular contact
	Butanol	Regular contact
	Acetone	Occasional contact
	Mineral spirits	Regular contact
	Xylene	Regular contact
	Lubrication oil	Regular contact
	Gasoline	Regular contact
	Skydrol	Regular contact

Based on 7-day immersion test at 70° F (21° C) after a 7 day cure at 70° F (21° C) and 50% relative humidity

APPLICATION INFORMATION

Mixing Ratio	2 to 1 by volume
Coverage	80 ft ² per gal (2 m ² /L) at 20 mils

Ambient Air Temperature	50–120 ° F (10–49 ° C)	
Pot Life	30–45 min at 75° F (24° C)	(ASTM D 2471)
Cure Time	Initial Cure 24 hrs at 75° F (24° C) Light Traffic 16 hrs at 75° F (24° C) Full Chemical Resistance 7 days at 75° F (24° C)	
Tack Free Time	4–6 hrs at 75° F (24° C)	

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

- The minimum ambient, surface, and material temperature should be 50° F (10° C) and rising at the time of application.
- Acceptable service temperatures vary depending on the type and frequency of chemical exposure. Contact Technical Service regarding your unique project considerations.
- For professional use only; not for sale to or use by the general public.
- Make certain the most current versions of the product data sheet and SDS are being used.
- Proper application is the responsibility of the user. Field visits by Sika personnel are for the purpose of making technical recommendations only and are not for supervising or providing quality control on the jobsite.

SUBSTRATE PREPARATION

1. The surface must be clean, structurally sound, and fully cured for 28 days.
2. Mechanically profile the surface of both old and new concrete by shotblasting to ICRI CSP 4, then remove dust by vacuuming.
3. Prime with SikaEmaco® P 130

Priming

1. Prime the prepared substrate with SikaEmaco® P 130.

Apply SikaEmaco® P 130 at a coverage rate of 150–300 ft²/gallon (3.6–7.4 m²/L). Refer to the SikaEmaco® P 130 data sheet for more details or call Sika Technical Service.

2. Allow SikaEmaco® P 130 to become tack-free (approximately 3–4 hours) before applying Sikagard®-170 CR.

MIXING

1. Precondition all components to 70° F (21° C) for 24 hours before using.
2. Thoroughly stir each separate component (epoxy resin Part A and the hardener Part B) before mixing the 2 components together.
3. The mix ratio by volume is 2:1 (A:B). Combine 1 part B with 2 parts A in a clean, suitably sized container. Scrape the sides of the containers to remove as much material as possible to ensure an accurate mixing ratio.
4. Mix the components together using a slow-speed (400–600 rpm) drill with a Jiffy mixer for at least 3 minutes until uniform in color with no streaks of color in the mixture.

APPLICATION

As A Coating For Concrete Substrates

1. Apply the mixed product to the clean, primed surface with a roller or brush. Use the shortest nap roller suitable for the prepared substrate profile.
2. Backroll the coating to ensure good wetting of the substrate, uniform thickness of the coating, and removal of any roller marks.
3. Apply two 20-mil coats at the rate of 80 ft²/ gal (2 m²/L) per coat.
4. To make the coating slip-resistant, broadcast clean, dry sand into the first coat while it is wet. Apply sand to the point of saturation (approximately 80 lbs/100 ft² [3.9 kg/m²]). When the coating is dry, sweep excess sand and apply the second coat of Sikagard®-170 CR.
5. Recoating must be done within 24 hours at 70° F (21° C). After 24 hours, mechanically abrade the entire surface of the coating and clean it with acetone or xylene. Allow Sikagard®-170 CR to dry and reapply the coating within 1 hour.

As A Topcoat For Epoxy Or Polyurethane Floor And Wall Coatings

1. When applying Sikagard®-170 CR over an existing coating, first conduct a test application.

2. Lightly sand the surface with medium sandpaper or a 60–80 mesh 3M screen back. Vacuum up all dust and solvent and wipe the floor with acetone. Allow to dry.
3. Apply the Sikagard®-170 CR within 1 hour and according to application instructions.

As A Trowel-down Topping

1. After mixing, slowly add 2–3 parts clean, dry sand by volume to 1 part mixed Sikagard®-170 CR epoxy by volume.
2. Trowel or screed the sand-modified Sikagard®-170 CR to the desired thickness (minimum ¼" or 6 mm).

CURING TREATMENT

Tack-free: approximately 4–6 hours

Traffic ready: 24 hours

Fully cured: 7 days at 75° F (24° C) and 50% relative humidity

CLEANING OF TOOLS

- Clean equipment immediately after use with xylene.
- Clean hands and skin immediately with soap and water, industrial hand cleaner, or denatured alcohol.
- Cured material can be removed by mechanical means only.

LEGAL DISCLAIMER

- KEEP CONTAINER TIGHTLY CLOSED
- KEEP OUT OF REACH OF CHILDREN
- NOT FOR INTERNAL CONSUMPTION
- FOR INDUSTRIAL USE ONLY
- FOR PROFESSIONAL USE ONLY

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Product Data Sheet

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