

# SOLIDGUARD HCP

## Chemical Resistant Epoxy Coating



Chemical resistant blend of Bisphenol-A and Bisphenol-F resin cured with a high cross-linking activator specifically formulated for coating or lining steel tanks and other surfaces in demanding acid or highly alkaline environments.

Applied either as a roller coat or in combination with glass fiber reinforcing membrane and chemical resistant C glass veil for optimum chemical resistance.

### UNIQUE PRODUCT BENEFITS

- High chemical resistance up to 98% sulphuric acid.
- Extremely tough and crack resistant.
- High mechanical properties.
- Low odour.
- Thermal shock resistant.

### TECHNICAL DETAILS

Compressive Strength	> 55 MPa	BS6319
Tensile Strength	> 30 MPa	
Flexural Strength	> 40 MPa	
Concrete Adhesion	> 1.5 MPa (Concrete failure)	ASTM D7234
Hardness	80	Shore D
Water Uptake (Permeability)	Nil	Karsten Test
Service Temperature	80°C	
Solids Content	100%	
Pot Life	30 to 60 min.	
Walk On Time	12 hrs at 20°C	
Full Cure	3 to 7 days	
Colours	Standard colours	

### LAMINATION (with glass cloth)

Glass Content	33% (2 x 450 GSM glass cloth)
Dry Film Thickness	1 to 3 mm

### METAL COATINGS (without glass cloth)

#### COVERAGE

Primer @ 200 µm	5 m <sup>2</sup> / L
Topcoat @ 250 µm	4 m <sup>2</sup> / L
Topcoat @ 500 µm	2 to 3 m <sup>2</sup> / L

#### PACKAGING

Two component 3 L or 15 L kits

*Leading manufactures of specialist epoxy and polyurethane flooring systems, specialised construction and corrosion protection products.*

Distribution facilities nationwide

Western Cape  
+27 (0)21 535 4455

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\*Product colours may differ from the ones shown above. For a full colour chart or for samples, contact your nearest Technical Finishes branch. UV exposure yellowing is more prominent in light colours yet does not affect performance.

## APPLICATIONS

- Demanding acidic environments.
- Highly alkaline environments.
- Petroleum storage tanks.
- Pulp and paper industry.
- Sugar industry.
- Tank farms.

## SUBSTRATE REQUIREMENTS

Concrete substrates must have a minimum compressive strength of 20 to 25 MPa, a minimum tensile pull-off strength of 1.5 MPa and be free of oil, fat, grease, dust, and loose friable materials. The moisture content should be less than 5% and free from rising damp or ground water pressure. The surface finish of the concrete should be class 2 (AS 3610).

Note: Any filling of blowholes / voids and surface levelling of the substrate can be achieved using appropriate products within Technical Finishes Construction Range (please speak to one of our technical sales representatives).

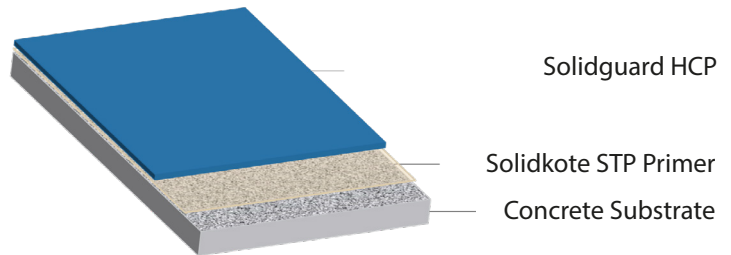
## PREPARATION

### Concrete Floors

Remove all previous coatings, unbonded concrete and laitance mechanically through diamond grinding, abrasive blasting or scarifying to obtain a sound and porous surface (sandpaper texture). Sweep dust and loose debris followed by vacuuming, to obtain a dry and dust-free surface.

### Steel

Steel surfaces require abrasive blast cleaning (Sa 2½, ISO 8501-1: 1988) with a blast profile that does not exceed 50 µm, alternatively the steel can be prepared mechanically



to Grade St3.

Mechanical cleaning is, however, not as effective as abrasive blasting and results in a shorter maintenance free life.

## PRIMING

Ensure application conditions of 15 to 28°C and that the concrete moisture content is below 5%.

### Concrete Floors:

Prime with Solidkote STP Primer.

Allow primer to cure for at least 8 hours prior to application of Solidguard HCP with a maximum over coating time of 18 hours.

### Steel:

Prime steel (shot blasted) with Solidguard 88. Allow primer to cure for at least 8 hours prior to the application of Solidguard HCP, with a maximum overcoating time of 7 days. Use only in well ventilated areas.

## MIXING & APPLYING

Ensure application conditions of 15 to 28°C. Ensure adequate lighting to achieve an even and level spread. Installation should not be attempted unless application team is fully trained.

### Mixing

Mix Part 1 thoroughly with a paddle or mechanical mixer.

Add the Part 2 into Part 1 and stir using a paddle or mechanical mixer for 2 minutes. Ensure the mixing paddle scrapes the sides of the mixing vessel. The mix should not be kept in the container as it will start to cure rapidly.

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## Brush / Roller

Pour out the mix into the demarcated area in a long ribbon and spread the mix using a steel trowel to obtain the correct coverage, then use a mohair roller to produce an even 200 to 250 µm film. Allow the first coat to cure for at least 10 hours prior to the application of the second coat with a maximum overcoating time of 18 hours.

## Airless Spray

This technique is recommended for large application. Conventional pressure pot equipment may also be used but must be tested to assess suitability.

Thinner:	Solidkote 505 Epoxy Thinner
Nozzle Orifice:	0.5 mm
Nozzle Pressure:	12 - 16 MPa (120 -160 bar, 1740 - 2321 psi)

Spray the Solidguard HCP onto the prepared surface to achieve a minimum film thickness of 300 µm in two coats. To achieve greater thicknesses allow the product to cure before applying subsequent coats. To give specified protection, a minimum of two coats should be applied.

## CLEANING SOLVENT

Solidkote 505 Epoxy Thinner

## OVERCOATING TABLE

Surface should be dry and free from any contamination. Solidguard HCP at 250 µm:

Substrate Temperature	5°C	15°C	25°C	35°C
Min Interval (with itself)	12 hrs	10 hrs	6 hrs	4 hrs
Solidguard PUR	16 hrs	12 hrs	8 hrs	6 hrs
Max Interval	7 Days			

## WATCH POINTS

Adhere to mix ratios as supplied and do not mix partial batches. Discard any mixed material left over from the previous day. Solidkote 505 Epoxy thinners is the only thinners confirmed compatible. Ensure there is good ventilation during the application and drying. Since the system is moisture sensitive, keep equipment free of water and Part 2 containers tightly sealed when not in use.

## MAINTENANCE

Regular cleaning extends the service life of the Solidguard HCP coating. Maintenance is to be carried out using Liquid Action which complies with SANS 1344 Medium Duty Solvent Detergent (2112/P3325/10/ID). Damaged areas of the system should be patch repaired in order to ensure longevity of the working area.

## HEALTH AND SAFETY

The system contains styrene and all appropriate PPE must be worn.

Please read Safety Data Sheet and specific health and safety data for this product provided in compliance with the requirements of OHSA No.85 of 1993. The finished system is not hazardous to health or the environment.

## WARRANTY

Technical Finishes products are manufactured under high quality standards and are warranted against defective materials and are sold subject to standard Terms and Conditions of Sale, copies of which can be obtained upon request. Technical Finishes deals with approved applicators and carry a back to back warranty with these clients. Technical Finishes cannot be held responsible for the workmanship in surface preparation and application of our products, it is understood that the approved contractor will guarantee such workmanship and application. It is vital that the application is done in accordance to our specification.

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