DATA SHEET

EPOXY HIGH CHEMICAL RESISTANT HARDENER

EPO100HCRH®

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Designed and Formulated in Australia by APC

DESCRIPTION

EPO100HCRH® is a severe service coating, high-build, 100% solids High Chemical Resistance Epoxy Coating. It provides resistance to harsh chemicals and can be used as a topcoat over EPO100T® where a high end extreme coating is required.

EPO100HCRH® coatings are characterised by their fast cure, excellent adhesion, outstanding chemical resistance and demonstrate excellent curing properties even at low temperatures (5°C).

RECOMMENDED USES

- Commercial Kitchens
- Chemical-resistant industrial flooring
- Mechanical Workshops
- Factories
- Warehouses
- 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
- Power Stations
- Plastics Industry
- Laboratories
- Battery storage areas
- Production areas
- Food-processing plants
- Waste areas

LOCATION

- Horizontal and vertical surfaces
- Interior or exterior below grade

SUBSTRATE

- Concrete and masonry

FEATURES AND BENEFITS

- Hard wearing-surface Durable, low-maintenance flooring
- Chemical resistant excellent resistance to sulfuric acid and a wide range of industrial chemicals
- 100% solids system solvent free; nearly odour-free application
- Liquid applied seamless protection of concrete
- Usable with aggregate broadcast creates a slip-resistant floor finish
- Higher heat resistance than normal epoxies
- Food Contact Safe:- https://www.accessdata.fda.gov/scripts/cdrh/cfdocs/cfcfr/CFRSearch.cfm?fr=177.2280

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PHYSICAL PROPERTIES

Chemical Resistance @ 25°C after curing 7 Days

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
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
Rate of Burning:	ASTM D635 Self-extinguishing
Compressive Strength	ASTM D695 12,000 psi
Tensile Strength	ASTM D638 3,900 psi

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PHYSICAL PROPERTIES CONTINUED

Elongation at Break	ASTM D638 7.00%
Abrasion Resistance:	
CS-17 wheel, 1 kg load	ASTM D4060 0.10gm loss
Water Absorption	ASTM D570 0/07% (2-hour boil)
Flexural Strength	ASTM D790 7,800 psi
Shore D Hardness	ASTM D2240 89
Heat Distortion Temperature	ASTM D649 50 Deg.C
Bond Strength to Concrete	100% Concrete failure

SURFACE PREPERATION

Surfaces must be clean, dry and free from all traces of loose material, old coatings, curing compounds, release agents, laitance, oil and greases etc. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa and with moisture content below 4%.

Structurally unsound layers and surface contaminants must be removed. Substrates heavily impregnated with oil must be cleaned via suitable solvent cleaning methods. To check that all traces of oil have been completely removed, sprinkle a few drops of water over the surface. If all water is quickly absorbed, the surface is sufficiently oil and grease free. If water forms into globules that remain on the surface, further thorough treatment of the substrate is necessary.

When used as a self-levelling floor topping it will not profile irregular substrates. For profiling defects on horizontal surfaces a suitable patching mortar is required. The patching mortar can be of epoxy or cementitious base depending on the scope, particular conditions and requirements of the work.

MIXING

Mix Part 'A' thoroughly using a power drill with paint mixing attachment.

Mix 3 parts resin 'A' with 1 part hardener 'B" thoroughly using a power drill with a paint mixing attachment for 2 minutes. Ensure that all the material on the sides and on the mixer, is incorporated. Take care to avoid air entrapment in the mix.

APPLICATION

First thoroughly stir the epoxy base to redistribute the pigment. If using more than one kit, compare the epoxy base (Part A) for colour matching. Base colours may vary slightly between different batches. If the colours are noticeably different, mix all the epoxy base containers together to obtain a uniform colour before mixing with the curing agent.

Mix EPO100HCR® Coating Kit epoxy base (Part A) with the EPO100HCR® Coating Kit curing agent (Part B). Use a mechanical mixer to ensure thorough mixing. The mixing ratio is 3/1 (base/curing agent) by volume. Make sure that both components are thoroughly mixed along sides and bottom of container. Unmixed components will result in 'hot spots' that will never cure. EPO100HCR® Coating Kit does not require a 'sweat-in' or induction time and the mixed components should be used immediately.

We recommend only thinning the Primer Coat, Epoxy Thinners will slightly reduce the strength and moisture resistance of the cured epoxy.

Apply using a brush, or roller. Use a lint free epoxy roller to apply the product.

For a lightly textured finish, add 10 to 15% Ceramic SLG powder to the mixed epoxy. If a more non-skid surface is required, broadcast the chosen grade of aggregate over the wet epoxy to 'refusal'. Allow the epoxy to rest for 12 hours and sweep off the excess aggregate. A topcoat of clear or pigmented EPO100HCR® is then rolled over the exposed aggregate.

If recoating after 72 hours a light sand will be required to ensure inter coat adhesion.

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APPLICATION CONTINUED

Note: Exposure to sunlight and UV radiation can result in discolouration and slight chalking. This will have no adverse effect on the protective function of the coating.

COVERAGE

4 – 6m2 per Litre as a Roll Coat System depending on method of application and porosity of the surface.

Normally 2 coats are required, film thickness will be approximately 300 microns per coat.

RETURN TO SERVICE

Light foot traffic 24 hours after completion of the job. Vehicle 24-48 hours. Sure hardness 72 hours. Full Chemical Cure 7 Days

SHELF LIFE

2 Years, keep in a cool dry area out of direct sunlight

POT LIFE

Depending on the temperature 20 minutes at 25 Deg.C, so mix only the amount of epoxy that can be easily applied within that time limit.

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