



APCEPO100HCR- High Chemical Resistance Epoxy

DESCRIPTION

APCEPO100HCR 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 epoxy and polyurethane coatings.

APCEPO100HCR coatings are characterized by their fast cure, excellent adhesion, and outstanding chemical resistance and demonstrate excellent curing properties even at low temperatures (5°C).

WHERE TO USE

- 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

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 odor-free application
- Liquid applied Seamless protection of concrete
- Usable with aggregate broadcast Creates a slip-resistant floor finish
- Higher heat resistance than normal epoxies



COLOURS ARE PRODUCED AS CLOSE AS POSSIBLE TO PRODUCTION STANDARDS.

- Where colour shade is critical, a site trial is strongly recommended prior to proceeding with the work.
- Ensure that finishing and application techniques remain consistent to prevent colour variations
- Note that some bright colours may require additional pigment packs to prevent opacity.
- Under direct sun light there may be some discolouration and colour variation; this has no influence on the function and performance of the coating.

PHYSICAL PROPERTIES

Compressive Strength	.....	ASTM D695 12,000 psi
Tensile Strength	.....	ASTM D638 3,900 psi
Elongation at Break	.....	ASTM D638 7.00%
Abrasion Resistance: CS-17 wheel, 1 kg load	.....	ASTM D4060 0.10gm loss
Water Absorption (2 hour boil)	.....	ASTM D570 0/07%
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 mechanically removed by abrasive blasting, blast-tracking or grinding. Substrates heavily impregnated with oil must be cleaned by torching or 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-leveling floor topping will not re-profile irregular substrates. For re-profiling defects on horizontal surfaces a suitable epoxy based patching mortar is required.



MIXING

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

Mix 2 parts 'A' with 1 part 'B'.

Mix thoroughly using a power drill with paint mixing attachment for 2 minutes, ensuring sides are well mixed.

Usable pot life for a 10 Lt. batch is 20 to 30 minutes, depending on temperature.

APPLICATION

Thoroughly stir the epoxy base to redistribute the pigment. If using more than one kit, compare the epoxy base (Part A) for color matching. Base colors may vary slightly between different batches. If the colors are noticeably different, mix all the epoxy base containers together to obtain a uniform color before mixing with the curing agent. Mix APCEPO100HCR epoxy base (Part A) with the APCEPO100HCR curing agent (Part B). Use a mechanical mixer to ensure thorough mixing. The mixing ratio is 2/1 (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.

APCEPO100HCR does not require a 'sweat-in' or induction time and the mixed components should be used immediately.

The use of Epoxy Thinners is not recommended, Epoxy Thinners will reduce the strength and moisture resistance of the cured epoxy.

Pot life for a 10L batch is approximately 20 minutes at 25 deg.c, so mix only the amount of epoxy that can be easily applied within that time limit. 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.

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



COVERAGE

0.3 to 1.0 Kg/SqM per coat depending on method of application and porosity of the surface.

Normally 2 to 3 coats are required, film thickness will be approximately 300 microns per coat.

INTERCOAT ADHESION

Re-coat within 48 hours without needing abrasion.

Chemical Resistance @ 25°C after curing 7 days.

Based on 7-day immersion test at (21° C)

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

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IMPORTANT NOTICE:

Read the MSDS and TDS carefully prior to use as application or performance data may change from time to time. In emergency, contact the Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

PRODUCT DISCLAIMER:

This Technical Data Sheet (TDS) summarises to the best of our knowledge the product, including how to use and apply the product based on the information available at the time. You should read this TDS carefully and consider the information in the context of how you will apply the product, including if it is being used in conjunction with any other products, the type of surfaces and the manner in which the product will be applied. Our responsibility for products sold is subject to our standard terms and conditions of sale. All Purpose Coatings does not accept any liability either directly or indirectly for any losses suffered that arises from the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

TECHNICAL DATA SHEET