

DATA SHEET

EPO100HCR HARDENER

HIGH CHEMICAL RESISTANCE HARDENER



DESCRIPTION

HCR Hardener is a proprietary formulation specifically designed for use in APC systems. EPO100HCR curing agent is a low-viscosity, cycloaliphatic amine adduct intended for use with EPO100T. EPO100HCR gives high-gloss, abrasion-resistant coatings that are resistant to a variety of solvents, acids, and bases. These coatings are also resistant to amine blush and water spotting at low-temperature, high-humidity conditions. These properties make EPO100HCR curing agent ideal for formulating maintenance coatings, flooring, tank linings, and grouts.

PRODUCT INFORMATION


Mixing	EPO100T: (3:1) 3 Parts EPO100T Part A: 1 Part EPO100HCR Part B EPO100C and EPO100G: (2:1) 2 Parts EPO100C or EPO100G Part A: 1 Part EPO100HCR Part B EPO100CC: (2:1) 2 Parts EPO100CC Part A: 1 Part EPO100HCR Part B
Dry Film Thickness	150-300 µm depending on the system, and application.
Shelf Life	2 years. Store in a cool, dry area and out of direct sunlight
Heat Resistance	Epoxy will begin to soften at 90°C.
Clean Up	Clean tools with 150T Epoxy Thinners while still wet and discard rollers and brushes
Cure Times	Pot Life: 30 Minutes Work Time: 30 Minutes Thin Tack Free: 6 Hours Thin Shore Hard: 48 Hours Max Re-coat Time: 48 Hours Without Sanding
Return to Service	Light Foot Traffic: 8 Hours Vehicle Traffic: 24-48 Hours Full Chemical Cure: 7 Days
Testing Information	Cure times completed at 25°C in a 100g container or at 200µm

ENVIRONMENTAL CONDITIONS

Temperature and the surrounding atmospheric conditions will play a part in the curing process of all epoxy products. Under conditions of low temperatures and high humidity, the final cured surface finish can be adversely affected potentially resulting in poor gloss retention, discolouration over time, poor overcoat ability, and inter-coat adhesion. Quite often these conditions will result in the formation of a white film over the surface often evident after contact with water. This chemical reaction with the atmosphere is commonly referred to as "amine bloom" or "amine blush".

If this occurs then the existing coating will need to be abraded to completely remove the affected surface to ensure the adhesion of subsequent application. In some cases, partial or complete re-priming may be necessary. Attention also needs to be paid to the substrate temperature which should be at least 5°C and preferably 5°C above the dew point during the curing phase. The ideal humidity is less than 60%.

Industry standards recommend the accurate recording of times and dates, batch numbers, consumption rates, and environmental conditions including the substrate and air temperatures, humidity levels, and dew point readings during both the application and curing process. Full material warranties cannot be provided unless all the relevant data has been recorded accurately.

 Refer to individual SDS and Installation Instructions for system specifications and recommended PPE.

RECOMMENDED USES

- High-solids coatings
- Self-level flooring systems
- Chemically resistant tank linings, mortars, and grouts
- Commercial kitchens and food processing plants
- Chemical-resistant industrial flooring
- Manholes, wet wells and lift stations
- Wastewater and metal treatment plants
- Power stations
- Plastics industry
- Laboratories
- Battery storage areas

FEATURES & BENEFITS

- Australian Made
- Excellent chemical resistance
- Resistance to amine blush
- Good resistance to water spotting at ambient and low temperatures
- Hard wearing
- Good abrasion resistance
- 100% solids system
- Solvent free
- Low VOC's (Volatile Organic Compounds)
- Self-levelling
- Self priming
- High durability

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SURFACE PREPARATION

- Ensure the concrete is sufficiently cured to the recommended minimum of 28 days from completion.
- Diamond grind or Polyvac the substrate. The surfaces must be clean, dry, and free from all traces of loose material, old coatings, curing compounds, release agents, laitance, oil, and grease, etc. This must be completed by diamond grinding or a suitable cleaning method.
- To check that all traces of oil and other contaminants 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.
- Substrate compression strength should be at least 25MPa, cohesive bond strength at least 1.5MPa, and moisture content below 4%.
- Repair and fill cracks with EPO100EP Epoxy Putty or Concrete Repair Kit.

CAUTIONS

- Avoid contact with skin and eyes. Use full PPE during application including but not limited to, gloves, mask and goggles.
- Provide adequate ventilation when using in confined spaces.
- The mix ratio is calculated by product volume. NOT BY PRODUCT WEIGHT. Mixing product by weight may result in an unsatisfactory cure time or failure of the mix to cure entirely.
- Due to EPO100HCR's low yellowing resistance, use only as a primer coat or in epoxy mortar and crack repair mixes.
- All Solvents, corrosives and spills should be cleaned up as soon as possible.
- **If re-coating after 48 hours since the last coat, a mechanical bond will need to be made by sanding the previous coat.**

PHYSICAL PROPERTIES

Solids content	100 %	Resistance to Chemical Spills (7 days at 25°C)	
Finish	Gloss	Hydrochloric Acid: 50% Regular contact	Sugar (saturated): Regular contact
Impact Strength	High	Nitric Acid: 25% Occasional contact	Sodium chloride (saturated): Regular contact
Compressive Strength	ASTM D695: 12,000 psi	Sulfuric Acid: 50% Regular contact	Methanol: Regular contact
Tensile Strength	ASTM D638: 3,900 psi	Phosphoric Acid: 50% Regular contact	Butanol: Regular contact
Elongation at break	ASTM D638: 7.00%	Acetic Acid: 10% Regular contact	Acetone: Occasional contact
Taber Abrasion Resistance (mg or loss/1000 cycles) CS-17-wheel, 1 kg load	ASTM D4060: < 0.1gloss	Sodium Hydroxide: 50% Regular contact	Mineral Spirits: Regular contact
Water Absorption	ASTM D570: 0/07% (2-hourboil)	Ammonia: 10% Regular contact	Xylene: Regular contact
Flexural Strength	ASTM D790: 7,800 psi	Bleach: 5% Regular contact	Lubrication Oil: Regular contact
Shore D Hardness	ASTM D2240: 84	Bleach Concentrate: Regular contact	Gasoline: Regular contact
Heat Distortion Temperature	ASTM D648: 50°C	Urea (saturated): Regular contact	Skydrol: Regular contact
Bond Strength to Concrete	100% Concrete failure		

In an emergency, contact the Poisons Information Centre on 13 11 26 or a doctor for advice.

IF THE SITUATION IS LIFE THREATENING, DIAL 000 IMMEDIATELY.

DISCLAIMER: Please ensure you read the SDS & TDS thoroughly & carefully before the use or application of any All Purpose Coatings product. These documents contain information in context to how you will apply the product, including if it is being used in conjunction with any other products or systems, and to what surface the product will be applied. All-Purpose Coatings Pty Ltd does not accept any liability either directly or indirectly for any losses that arise from the use or application of the product in accordance with any advice, specification & recommendation given by the companies' documentation or representatives at any point in time. Application, performance & safety data may change from time to time. It is the user and/or applicators' responsibility to ensure they have the latest copy of any documentation pertaining to their project.

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