

# 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.

### 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 and Benefits

- Australian Made
- High gloss
- Excellent adhesion with high durability
- Self-levelling and self priming
- Low VOC's (Volatile Organic Compounds)
- Low viscosity
- Good resistance to water spotting at ambient and low temperatures
- Excellent chemical resistance
- Pre-coloured / tinted
- Solvent free
- APAS approved (Australian Paint Approval Scheme)
- Food contact safe

### Product Information

<b>Mixing Ratio</b>	<p><b>EPO100T:</b> (3:1) 3 Parts EPO100T Part A: 1 Part EPO100HCR Part B</p> <p><b>EPO100C and EPO100G:</b> (2:1) 2 Parts EPO100C or EPO100G Part A: 1 Part EPO100HCR Part B</p> <p><b>EPO100CC:</b> (2:1) 2 Parts EPO100CC Part A: 1 Part EPO100HCR Part B</p>
<b>Dry Film Thickness</b>	150-300 µm depending on the system, and application.
<b>Shelf Life</b>	2 years. Store in a cool, dry area and out of direct sunlight.
<b>Heat Resistance</b>	Epoxy will not begin to soften until 90°C.
<b>Clean Up</b>	Clean tools with 150 Epoxy Thinners while still wet and discard rollers and brushes.
<b>Cure Times</b>	<p><b>Pot Life:</b> 30 Minutes</p> <p><b>Work Time:</b> 30 Minutes</p> <p><b>Thin Tack Free:</b> 6 Hours</p> <p><b>Thin Shore Hard:</b> 48 Hours</p> <p><b>Max Re-coat Time:</b> 48 Hours Without Sanding</p>
<b>Return to Service</b>	<p><b>Light-Foot Traffic:</b> 8 Hours</p> <p><b>Vehicle Traffic:</b> 24-48 Hours</p> <p><b>Full Chemical Cure:</b> 7 Days</p>
<b>Maintenance</b>	Refer to APC Clean and Care guide.
<b>Testing Information</b>	Cure times completed at 25°C in a 100g container or at 200µm.

NOTE: Refer to individual Installation Instructions & SDS for mixing instructions, recommended PPE during preparation & application of products.

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TECHNICAL DATA SHEET APC V0224



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### 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 10°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.

### 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.

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## Physical Properties

<b>Solids content</b>	100 %
<b>Finish</b>	Gloss
<b>Rate of Burning</b>	ASTM D635: Self-Extinguishing
<b>Compressive Strength</b>	ASTM D695: 12,000 psi
<b>Tensile Strength</b>	ASTM D638: 3,900 psi
<b>Elongation at Break</b>	ASTM D638: 7.00%
<b>Taber Abrasion Resistance</b>	ASTM D4060: <0.1mg loss (mg of loss/1000 cycles) CS-17-wheel,1 kg load
<b>Water Absorption</b>	ASTM D570: 0/07% (2-hour boil)
<b>Flexural Strength</b>	ASTM D790: 7,800 psi
<b>Shore D Hardness</b>	ASTM D2240: 84
<b>Heat Distortion Temperature</b>	ASTM D648: 50°C
<b>Bond Strength to Concrete</b>	100% Concrete failure
<b>Resistance to Chemical Spills (7 days at 25°C)</b>	Hydrochloric Acid: 50% Regular contact Nitric Acid: 25% Occasional 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: 5% Regular contact Bleach Concentrate: 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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### CAUTION

- 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.

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