

# TECHNICAL DATA SHEET

## EPO100CLD Hardener

### Cold Cure Hardener



### Description

CLD Hardener is designed specifically for cold rooms and cool climates, working best at temperatures between 5°C and 15°C. Ideal for use in a matrix system, it ensures strong and lasting results in continuously cold environments. CLD Hardener activates in low temperatures and continues to cure even as conditions fluctuate. Not suitable for outdoor use or room temperature applications, it provides fast curing and longevity in low temperature settings.

### Recommended Uses

- Cold rooms
- Cold storage warehouses
- Walk-in freezers & refrigerators
- Food processing plants
- Dairy farms & milking parlors
- Ice rinks & arena walkways
- Medical & pharmaceutical labs
- Meat lockers & butcher shops
- Shopping centre internal areas
- Breweries & wineries storage areas

### Features and Benefits

- Moisture tolerant during curing
- Good adhesion to damp, green and dry substrates
- High durability with excellent abrasion resistance
- Self-levelling and self priming
- Low VOCs (Volatile Organic Compounds)
- Low viscosity
- Excellent chemical resistance
- Solvent free
- Food contact safe

### Product Information

#### Mixing Ratio

**EPO100T®:** (3:1) 3 parts EPO100T Part A: 1 part EPO100CLD Part B

**EPO-HI® Tinted:** (3:1) 3 parts EPO-HI® GP Tinted Part A: 1 part EPO100CLD Part B

**EPO-HI® GP Clear Epoxy:** (2:1) 2 parts EPO-HI® GP Clear Epoxy Part A: 1 Part EPO100CLD Part B

150-300 µm depending on the system, and application.

#### Dry Film Thickness

12 months. Store in a cool, dry area and out of direct sun-light.

#### Shelf Life

Epoxy will not begin to soften until 90°C.

#### Heat Resistance

#### Clean Up

Clean tools with APC Thinners while still wet and discard rollers and brushes.

#### Cure Times

**Pot life:** 30 minutes

**Work time:** 30-45 minutes

**Thin tack free:** 5-6 hours depending on the system

**Thin shore hardness:** 6-16 hours

**Max recoat time:** 54 hours

#### Return to Service

**Light foot traffic:** 12 hours

**Vehicle traffic:** 36 hours

**Full chemical cure:** 7 days

#### Testing Information

Cure times completed at 18°C in a 150g container or at 200µm.

#### Maintenance

Refer to APC Clean and Care guide.

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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 above 0°C and preferably 5°C above the dew point during the curing phase. The ideal humidity is less than 75%.

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 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 6%.
- Repair and fill cracks with EPO100EP Epoxy Putty or APC Concrete Repair Kit.

### 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, 1kg 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

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#### Physical Properties Cont.

**Bond Strength to Concrete**

100% concrete failure

**Heat Distortion Temperature**

ASTM D648: 50°C

**Bond Strength to Concrete**

100% concrete failure

**Resistance to Chemical Spills  
(7 days at 25°C)**

Ammonia solution (20%)	Sodium hydroxide (30%)
Sulphuric acid (30%)	Kerosene
Lactic acid (5%)	Aviation fuels
Sodium chloride (50%)	Petrol
Tannic acid	Hydrochloric acid (20%)
Acetic acid (5%)	Toluene

#### 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.
- Use EPO100CLD only in commercial systems, primer coats or coving mixes.
- All solvents, corrosives and spills should be cleaned up as soon as possible.
- **If recoating after 54 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.