

TECHNICAL DATA SHEET

EPO-HI® GP CLEAR EPOXY WINTER HARDENER

Heavy Industry Clear Epoxy

Description

EPO-HI® General Purpose Clear Epoxy Winter Hardener is a specialty epoxy curing agent specifically for use in cooler weather and is to be mixed with EPO-HI® GP Clear Resin. EPO-HI® GP Clear Epoxy Winter Hardener shortens the curing time and reduces the risk of amine blushing in cooler conditions. EPO-HI® GP Clear exhibits excellent adhesion, high structural strengths and has been formulated with an A/F blend, resulting in high chemical resistance. The exceptional resistance to a wide variety of chemical spillage and vapours makes this product ideal for use in heavy industry environments.

Recommended Uses

- Binding systems
- Coving
- Mortar
- Crack repair
- Encapsulation
- Prime or sacrifice coat

Features and Benefits

- Australian Made
- Industrial strength
- Excellent adhesion
- Self-levelling
- High build application
- Solvent free
- Low viscosity
- Low VOCs (Volatile Organic Compounds)
- MPa greater than concrete
- Food contact safe

Product Information

Mixing Ratio

EPO-HI-GPC Mix (2:1)

2 litres EPO-HI-GPC Part A
1 litre EPO-HI-GPCHW Part B

Mortar Ratio

Self Priming Mortar - 3L : 20kg

3 litres EPO-HI-GPC mix (Parts A & B)
20 kilograms Silica Sand (55 MPa)

Ceramic Ratios

Stiff Mortar - 1.5L:20kg

1.5 litres EPO-HI-GPC mix (Parts A & B)
20 kilograms Silica Sand (50 MPa)

Ceramic Screed - 3L : 4L

3 litres EPO-HI-GPC mix (Parts A & B)
3 litres Ceramic Filler (90 MPa)

Additives

Ceramic Putty - 3L : 5L

3 litres EPO-HI-GPC mix (Parts A & B)
5 litres Ceramic Filler (90 MPa)

APC Thinners: when applying as a roll coat, 5% APC Thinners should be added for ease of application, depending on the porosity of the substrate.

Accelerator: APC Accelerator can be used at up to 10% to accelerate cure times.



TECHNICAL DATA SHEET

EPO-HI® GP CLEAR EPOXY WINTER HARDENER

Heavy Industry Clear Epoxy



Production Information (Continued)

Coverage	4 - 6m ² /L Dependent on the system, application and porosity of the substrate
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 APC Thinners while still wet and discard rollers and brushes.
Cure Times	<p>Pot life: 35 minutes</p> <p>Thin tack free: 5 hours</p> <p>Thin shore hardness: 72 hours</p> <p>Full chemical cure: 7 days</p> <p>Light foot traffic: 24 hours</p> <p>Note: No water or condensation should come into contact with the coating for 3-5 days from installation.</p>
Testing Information	Cure times were completed at 25°C in a 150g container or at 200µm.
Maintenance	Refer to APC Clean and Care guide.

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 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%.
- Fill cracks with EPO100EP Epoxy Putty or APC Concrete Repair Kit.



TECHNICAL DATA SHEET

EPO-HI® GP CLEAR EPOXY WINTER HARDENER

Heavy Industry Clear Epoxy

Product Application

- GP Clear is specifically designed as a binder for use in epoxy mortars, repairs, screed coats, and as a prime or sacrifice coat.
- Mix 2 Parts A with 1 Part B (2:1) by volume. Mix with a drill mixer at a slow speed for 2 minutes. Ensure the sides and bottom of the container/bucket are mixed. Tilt the drill to the side to ensure the product on top of the container/bucket is mixed in with the product on the bottom. If mixing sand or ceramic, only add the dry products once the wet, or Part A and Part B, have been mixed thoroughly.
- In normal curing conditions, the GP Clear Coating Kit does not require an induction time and can be used immediately after mixing. For colder climates, see product cautions for further information on mixing and induction times.
- For system specific instructions, consult the All Purpose Coatings Installation Instruction documentation, located on the website.

Physical Properties

Solids Content	100%
Compressive Strength	ASTM D695: 12,000 PSI
Tensile Strength	ASTM D638: 3,900 PSI
Elongation at Break	ASTM D638: 7.00%
Flexural Strength	ASTM D790: 7,800 psi
Shore D Hardness	ASTM D2240: 84
Bond Strength to Concrete	100% concrete failure
Heat Distortion Temperature	ASTM D648: 50°C
Volatile Organic Compounds	AP-T002: very low
Water Absorption	ASTM D570: 0/07% (2 hour boil)
Impact Resistance	AS 1580.406.1: high

TECHNICAL DATA SHEET

EPO-HI® GP CLEAR EPOXY WINTER HARDENER

Heavy Industry Clear Epoxy

CAUTION

- Avoid contact with skin and eyes. Use full PPE during application including but not limited to, gloves, mask and goggles.
- Not recommended as a top coat.
- Thoroughly mix Part A and Part B using a drill mixer at a slow speed for 2 minutes. Ensure that all materials on the sides and on the mixer are combined thoroughly to avoid hot spots and areas that may never cure on application.
- 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. Mortar mix ratios are the one exception where the epoxy is added by volume and the sand is added by weight.
- To achieve optimum results in colder climates, you may need to warm the resin or introduce an induction time before application. This will jump start the curing process. For further information, consult APC, technical advisers.
- All solvents, corrosives, and spills should be cleaned up as soon as possible.
- Sunlight and UV radiation can cause discolouration and chalking of the surface. However, this won't affect the coating's protective functions.
- **If recoating after 72 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.

