

TECHNICAL DATA SHEET

EPO100CC CHEMICOAT®

100% Solids, High Chemical Resistance, Low VOCs



Description

This industrial floor and wall epoxy coating is an 100% solids, two-pack cycloaliphatic amine cured epoxy resin. This is a superior coating used where a higher resistance to substances and heavy traffic is required. Typical uses include commercial kitchens, tanks, pipes, sewers and bunding. ChemiCoat® is a high gloss and self-levelling epoxy resin, designed as a stand-alone and as a binder for slip resistant surfaces.

Recommended Uses

- Tanks and sewage systems
- Mechanical workshops and warehouses
- Factories and food processing plants
- Laboratories, chemical and pharmaceutical industries
- Power stations
- Clean rooms, washrooms, cloakrooms
- Wet and dry process areas
- Loading bays and ramps
- Mining
- Battery storage areas

Features and Benefits

- APAS approved (Australian Paint Approval Scheme)
- Australian Made
- High gloss
- Excellent adhesion with high durability
- Self-levelling and self priming
- Low VOCs (Volatile Organic Compounds)
- Low viscosity
- Excellent abrasion resistance
- Excellent chemical resistance
- Pre-coloured / tinted
- Solvent free
- MPa greater than concrete
- Amine blush resistance

Product Information

Mixing Ratio

(2:1) 2 Parts EPO100CCA Part A : 1 Part EPO100CCH Part B

Coverage

Standard Coat: 4-6m²/L depending on the method of application and porosity of the surface.

Flood Coat: 1m²/L

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 not begin to soften until 90°C.

Clean Up

Clean tools with APC 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 hardness: 48 hours

Max recoat 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.

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 at least 10°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 4%.
- Repair and fill cracks with EPO100EP Epoxy Putty or APC Concrete Repair Kit.

Product Application

- Mix ChemiCoat® Part A thoroughly prior to combining it with ChemiCoat® Epoxy Hardener Part B.
- 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 mixing in with the product on the bottom. In normal curing conditions, the EPO100CC® Coating Kit does not require an induction time and coating can begin immediately after mixing. For colder climates, see product cautions for further information on mixing and induction times.
- It is recommended that the first coat of ChemiCoat® be applied with up to 10% APC Thinners to ensure high penetration and adhesion to the substrate. Subsequent coats can be thinned but, a sufficient curing time will be required to allow the solvent content to evaporate from the product before re-coating or top coating when used as part of an All Purpose Coatings system. The re-coat time is typically, 12-24 hours at 25°C. Apply using a brush or lint-free roller.
- For system-specific instructions, consult the All Purpose Coatings Installation Instruction documentation, located on the website.

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Physical Properties

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| Solids Content | 100% |
| Finish | Coloured gloss |
| Impact Resistance | Excellent |
| Compressive Strength | ASTM D695: 12,000 PSI |
| Tensile Strength | ASTM D638: 3,900 PSI |
| Elongation at Break | ASTM D38: 7.00% |
| Taber Abrasion Resistance | ASTM D4060: <0.1g loss (mg or loss/1000 cycles) CS-17-wheel, 1kg load |
| Water Absorption | ASTM D570: 0/07% (2 hour boil) |
| 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 |
| Resistance to Chemical Spills (7 days at 25°C) | Regular Contact Hydrochloric acid 50% Sulfuric acid 50% Phosphoric acid 50% Acetic acid 10% Sodium hydroxide 50% Ammonia 10% Bleach 5% Bleach concentrate Urea (saturated) Sugar (saturated) Sodium chloride (saturated) Methanol Butanol Mineral spirits Xylene Lubrication oil Gasoline Skydrol Occasional Contact Nitric acid 25% Acetone |

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CAUTION

- When used as a self-levelling floor coating, ChemiCoat will not profile irregular substrates. For the profiling of defects on horizontal surfaces a suitable patching or repair mortar will be required.
- The mix ratio is calculated by product volume. **NOT BY PRODUCT WEIGHT.** Mixing products by weight may result in an unsatisfactory cure time or failure of the mix to cure entirely.
- 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 All Purpose Coatings technical advisers.
- Exposure to sunlight and UV radiation will result in discolouration of the cured surface. This exposure may also chalk the surface. This will have no adverse effect on the protective functions of the coating. Top coats may slow this process but will not stop it.
- All solvents, corrosives and spills should be cleaned up as soon as possible.
- **If recoating over 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.