

EPO100CM CERAMIC MORTAR

100% Solids, LOW VOC



Description

EPO100CM is a 100% Solids, three-part epoxy resin Ceramic Mortar system, designed for applications demanding high structural integrity. EPO100CM exhibits excellent adhesion and high structural strengths. The exceptional resistance to a wide variety of chemical spillage and vapors makes this product ideal for use in heavy industry environments. With the ability to be coupled with slow curing hardener makes EPO100CM ideal for grouting and filling.

Recommended Uses

- Mortar
- Crack repair
- Self-level system
- Reciprocating machinery
- Testing equipment
- Heavy crane and transporter rails
- High speed turbines
- Centrifuges and drop forges

Features and Benefits

- Excellent chemical resistance
- Industrial strength and excellent adhesion
- High build application
- Food contact safe
- Bond strength stronger than concrete
- Low yellowing properties
- High compressive, tensile and flexural strengths
- Resistant to repetitive dynamic loads
- Virtually no shrinkage and hence ensures complete surface contact and bond.
- Excellent flow properties
- Wide range of gap thicknesses are possible

Product Information

Shelf Life	2 years. Store in a cool, dry area and out of direct sunlight
Clean Up	Clean tools with 150T Epoxy Thinners while still wet and discard rollers and brushes
Mixing Ratio	(2:1:4) 2 Parts EPO100C Part A : 1 Part EPO100SCC Part B : 4 Parts 200C Ceramic Part C
Cure Times	Pot Life: 45 Minutes Work Time: 0.5 Hour Thin Tack Free: 3 - 4 Hours Thin Shore Hardness: 72 Hours Max Recoat Time: 72 Hours (See Cautions)
Return to Service	Light Foot Traffic: 24 Hours Vehicle Traffic: 24-48 Hours. Full Chemical Cure: 7 Days The curing times will depend on the hardener used in the mix.
Testing Information	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.

1800 437 699 | SALES@ALLPURPOSECOATINGS.COM.AU | 16 HAWKINS CRESCENT, BUNDAMBA, QLD 4304.

TECHNICAL DATA SHEET APC V0124

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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.
- **Steel Surfaces:** All steel should be shot blasted, free from rust, paint, and flaky mill scale.

Product Application

- EPO100CM will formulate an easy-flow epoxy, self-levelling mortar grout with exceptional mechanical and chemical-resistant properties. 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. Only add and mix the ceramic in once Part A and Part B, have been mixed together.
- **Formwork:** The formwork should be contrasted to be leakproof as EPO100CM is a free-flowing grout. Loss of grout once the material is placed will result in incomplete filling of the gap.
- For free-flow grout conditions, it is essential to provide a hydrostatic head of grout. To achieve this a feeding hopper system should be used. Forming materials should be coated with a release agent such as APC Tape; line the sides with APC Tape for easy release, alternatively, use a grease, wax or a plastic coating. These coatings act as a bond breaker so that a smooth grout surface is achieved after form removal and the forms are protected for re-use.
- **Placing:** The mixed grout should be poured steadily from one side only to eliminate the entrapment of air. Continuous grout flow is essential. Sufficient grout must be available prior to starting. The time taken to pour a batch should be regulated to the time taken to prepare the next batch.

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Physical Properties

Solids Content	100%												
Impact Resistance	AS 1580.406.1: High												
Compressive Strength	ASTM D695: 12,000 PSI												
Tensile Strength	ASTM D638: 3,900 PSI												
Elongation at Break	ASTM D638: 7.00%												
Taber Abrasion Resistance	AS/NZS 1580.403.2-2006: 133mg loss (mg of loss/1000 cycles) H022 Wheel; 1000 grams weight												
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)	<table border="0"> <tr> <td>Ammonia Solution (20%)</td> <td>Sodium Hydroxide (30%)</td> </tr> <tr> <td>Sulphuric Acid (30%)</td> <td>Kerosene</td> </tr> <tr> <td>Lactic Acid (5%)</td> <td>Aviation Fuels</td> </tr> <tr> <td>Sodium Chloride (50%)</td> <td>Petrol</td> </tr> <tr> <td>Tannic Acid</td> <td>Hydrochloric Acid (20%)</td> </tr> <tr> <td>Acetic Acid (5%)</td> <td>Toluene</td> </tr> </table>	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
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Sample Identification	Critical Heat Flux (kW/m ²)			Smoke Value % min		
	≤11	≤11	≤11	5	1	2
Epoxy Coating Kit Tinted EPO100T®	Average: ≤11			Average: 3		
Epoxy Resin Clear Glaze EPO100G®	Average: ≤11			Average: <4		
Epoxy Resin Clear EPO100C®	Average: ≤11			Average: <4		

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CAUTION

- Grouting may be carried out without special precautions at ambient temperatures from 10°C to 35°C.
- Cure temperatures below 20°C will result in a slower curing time; at 5°C curing will stop until the material warms.
- 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.
- All Epoxy systems will generate heat once Part A and B are mixed. Larger volumes of EPO100CM will result in higher temperatures and may weaken or crack the system.
- 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.
- Exposure to sunlight and UV radiation can result in discolouration of the cured surface. This will have no adverse effect on the protective functions of the mortar.
- Maximum of 14L (mixed Part A, Part B, and Ceramic) is advised per pour in order to control the maximum exothermic curing temperature.
- Pours greater than 120mm thick are possible however consideration should be taken for the total volume. Please consult our technical department for further advice.
- You can re-pour over the existing coating after the initial gel stage. The approximate tack-free time is 2 hours at 25°C.
- All Solvents, corrosives and spills should be cleaned up as soon as possible.

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.