

TIE COAT, CONCRETE COATING & REPAIR EPOXY

EPAR 226

TECHNICAL DATA

1.0 DESCRIPTION

EPAR 226 is a low viscosity, unfilled epoxy with excellent mechanical properties. EPAR 226 may be used for a variety of applications as supplied or may be mixed with suitable aggregate to make epoxy mortars, grout or toppings.

EPAR 226 fully complies with the test requirements of AS/NZS 4020, Products for use in contact with Potable Water (standard hardener only).

2.0 PHYSICAL PROPERTIES:

2.1	Viscosity	Low (typical mixed viscosity at 20°C: 640 cP). An extra low viscosity version is available.
2.2	Mix Ratio	Three parts resin: 1 part hardener by volume.
2.3	Pot Life	20 – 30 minutes at 20°C.
2.4	Minimum Application Temp.	10°C.
2.5	Shelf Life	1 year in original unopened containers.
2.6	Cured Properties	(Unfilled at 20°C)
2.6.1	Colour	Transparent
2.6.2	Specific Gravity	1.1
2.6.3	Compressive Strength	55 MPa (2 days) 87 MPa (7 days)
2.6.4	Compressive Modulus	2 GPa
2.6.5	Tensile Strength	24 MPa (7 days)
2.6.6	Thermal Expansion	5×10^{-5} mm/mm/°C.
2.7	Cured Properties of Filled Systems (20 °C, 7 days)	
2.7.1	Pourable Grout	1 part epoxy: 1.5 parts silica sand.
	Compressive Strength	65 MPa
	Tensile Strength	16 MPa
2.7.2	Trowellable Mortar	1 part epoxy: 3 parts silica sand.
	Compressive Strength	70 MPa
	Tensile Strength	20 MPa
2.8	Compliance	
2.8.1	EPAR 226 fully complies with the test requirements of AS/NZS 4020:2005 (contact with potable water) to cover a cold water application up to <40°C, at the recommended 'total immersion' exposure of ~30,000mm ² per litre of water (standard hardener only). Compliance testing by AMS Laboratories Pty Ltd, NSW Australia. A copy of the compliance report is available on request.	

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3.0 USES

- 3.1 Grouting or bedding of machinery, base plates, crane rails, precast concrete units etc.
- 3.2 General patching and repair of concrete when mixed with aggregate to form a mortar. Repair of cracks in concrete by injection or gravity feed. Crack injection of structural concrete – refer to EPAR 226XLV data sheet.
- 3.3 Grout for fixing bars or bolts into concrete or steel ducts either unfilled or filled depending on dimensions and clearances.
- 3.4 New to old concrete tie coat.
- 3.5 Coating/sealer for concrete floors.
- 3.6 Coating the inside of water retaining tanks or pipelines in contact with drinking water (see also additional details).

4.0 APPLICATION INSTRUCTIONS

- 4.1 **SURFACE PREPARATION:** Thoroughly clean the jointing surfaces of all extraneous matter, especially oil and grease. Laitance should be removed from concrete surfaces mechanically. For best results steel surfaces should be prepared by sand blasting or grinding. All surfaces should be dry. When used as a concrete tie coat, surfaces should be dry and completely free of dirt, rust, curing compounds, grease, oil, paint, waxes and other materials that would prevent a solid bond. For proper adhesion, DO NOT use a curing compound. Water cure where possible. Concrete should be cleaned by sandblasting or scabbling to a sound surface if required. Where concrete floors have been power-floated, remove the glaze by sandblasting or wire brushing. Vacuum or blow dust away with oil-free compressed air. Any laitance must be removed prior to application of the coating as the laitance will be weak and not provide sufficient strength for the coating. Acid etching of the concrete is not recommended unless conditions prohibit the use of alternative methods. All surfaces should be dry after preparation.
- 4.2 **MIXING:** Accurately proportion required volume of resin and hardener ensuring this amount can be used within its pot life. Mix thoroughly preferably using a paint stirrer fitted to a low speed electric drill. During the mixing process scrape the bottom and sides of the container at least once with a spatula or similar tool to ensure all components are incorporated. Mixing should continue for approximately 5 minutes. Take care to avoid air entrapment.
- 4.3 When applied as a coating, apply one or two coats as applicable using a nylon brush or roller or by spray. If a second coat is required, apply within 6 hours of the first coat. After 6 hours, the surface must be mechanically etched, cleaned and recoated with EPAR 226.
- 4.4 When EPAR 226 is to be mixed with aggregate, resin and hardener should first be mixed as above. Aggregate to be added to the epoxy must be completely dry. Blend in sufficient aggregate to obtain the desired viscosity and mix until an even texture is obtained.
- 4.5 **PRIMING:** When EPAR 226 is mixed with more than 3 parts aggregate to 1 part epoxy surfaces to which it is to bond should first be primed with unfilled EPAR 226. For best results, brush apply a thin coating of EPAR 226, working it well into the substrate. Apply aggregate filled EPAR 226 while the prime coat remains tacky.



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- 4.6 When trowelling filled EPAR 226, a smooth finish may be obtained by keeping the face of the trowel wet with EPAR Epoxy Solvent.
- 4.7 **CLEAN-UP:** Tools and equipment may be cleaned before hardening commences by washing with EPAR CLEAN UP SOLVENT. Clean hands and skin with soap and hot water.
- 4.8 Refer to the Product Safety Data Sheet for health and safety and handling information.

5.0 CONCRETE TIE COAT

- 5.1 **SURFACE PREPARATION:** Refer section 4.1 above.
- 5.2 **MIXING:** Store epoxy components in a warm room prior to mixing. Refer to section 4.2 for mixing instructions.
- 5.3 **APPLICATION:**
 - 5.3.1 New concrete surfaces should be cured for at least 8 - 10 days before application of EPAR 226.
 - 5.3.2 Apply EPAR 226 undiluted at the rate of 4m² per litre using a roller (250µm layer). Work well over the area to be treated. Work to a zone where possible if application cannot be completed in one day. Avoid mixing large quantities of EPAR 226 that cannot be used within its pot life. Work life depends on temperature and mass of epoxy mixed.
 - 5.3.3 All surfaces must be prepared as per Surface Preparation above. EPAR 226 can be applied to damp surfaces (free from any standing water), as long as the surfaces are correctly prepared (see section 5.3.4)
 - 5.3.4 For damp surfaces, it is important to work the EPAR 226 well into the substrate. DO NOT apply to any surface with standing water on it. Remove all standing water from the surface – there must not be a damp sheen on the surface of the concrete. Work to a zone where possible if application cannot be completed in one day. Avoid mixing large quantities of EPAR 226 that cannot be used within its pot life. Work life depends on temperature and mass of epoxy mixed. Do not apply when substrate temperature is below 10°C.
 - 5.3.5 Pour the fresh concrete while the EPAR 226 is still tacky. This is a maximum of 3 to 4 hours after application (at 17°C). Note that the time will extend at lower temperatures and reduce at higher temperatures and ambient conditions. Check for tackiness by testing with a dry finger – the epoxy should be tacky and not liquid (it must not come off the concrete onto the finger). Do not allow the EPAR 226 to cure before the fresh concrete is poured otherwise a bond will not occur. If cured, another coat of EPAR 226 must be applied within 6 hours. After 6 hours, the surface must be mechanically etched, cleaned and recoated with EPAR 226.



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6.0 ADDITIONAL INFORMATION

EPAR 226 should only be applied to clean, sound concrete or steel. Do not apply over the top of existing coatings, curing compounds, etc. Minimum application temperature is 10°C.

An Extended Pot Life hardener is available for EPAR 226. This hardener provides a longer pot life and therefore a longer working time/application window. It is not certified for contact with potable water.

Potable water certification only applies to the standard EPAR 226 hardener and resin system. The tested total immersion exposure is ~30,000mm² per litre of water.

When applied to substrates in contact with potable water, the epoxy must be allowed to fully cure for 7 days before being exposed to water. After curing, thoroughly wash the entire coated substrate with clean water and then discard the water.

7.0 PACKAGING

1 litre, 4 litre, 20 litre and 80 litre packs.



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