

BluCem API0

BOND PROMOTING PRIMER AND CONCRETE CURING AGENT

BluCem API0 is a concentrated liquid which only requires the addition of water to form a bond promoting primer and concrete curing compound.

BluCem API0 is a spray or roller applied, concrete surface treatment suitable for civil engineering applications. BluCem API0 incorporates acrylic polymers to form a coating which promotes bond and also retains water for concrete curing. It is suitable for indoor and outdoor applications and is potable water use approved in accordance with AS/NZS 4020: 2005.

Application Advantages

- Low viscosity
- Long pot life
- Easy to apply

Lifecycle Advantages

- Promotes high bond strength between layers
- Retains water to enhance concrete curing
- Potable water use approved

About the Product

BluCem API0 is an acrylic based emulsion which acts to retain water within freshly cast cementitious products and also create a polymer-rich primed surface where applied. The polymer molecules will improve ductility of the contact zone and ensure deeper connection of the interfacing cement particles. These features combine to improve the connection between cement based layers and also promote full hydration of the cement particles. This all ensures full strength development at areas of application to create high bond, hard and durable finished surfaces.

Application Solutions

- Concrete repair
- Concrete curing
- Cold joint bonding

Project Specification Clause

CONCRETE CURING AGENT AND PRIMER - The bond promoting liquid primer and curing agent used for this project shall be a concentrated liquid which requires only the addition of water to form a durable bond and hydration promoting product. It shall be a pre-blended product that has independent testing to validate the performance outlined in the technical data table on the following pages. BluCem API0 manufactured by Bluey Technologies or equivalent shall be accepted.

Project Examples

Airport construction, bridge repair, building repairs, dam construction and repair, factory floors, car park decks, jetty construction and repair, concrete structures, rail construction, rail repairs and shutdowns, retail outlets, retaining walls, road repairs, runway repairs and shutdowns, sea wall repair and maintenance, sewer repair and lining, tunnel lining, warehouse floors, wharf repair and construction.



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Application Specification

CONCRETE PREPARATION

- 1.1 All defective host substrate must be removed prior to application. Defective material includes cracked or structurally weakened surfaces and also chloride contaminated and carbonated concrete. A concrete corrosion expert must be consulted for critical projects or structural applications.
- 1.2 Host concrete must be roughened and aggregate exposed to ensure good bond. High pressure water blasting or mechanical chipping of the surface is recommended for this purpose. All surfaces must be free of dust, oils and surface contaminants. This may require steam cleaning or high pressure water blasting if site conditions permit.

CONCRETE PRIMER APPLICATION

- 2.1 Thoroughly mix 1 Part BluCem API0 with 4 parts water to create a coating ready for application.
- 2.2 The primer should be worked into the surface of the concrete to ensure thorough coverage. Any ponding of material shall be mopped up to ensure uniform minimum thickness.
- 2.3 The repair mortar or grout mix must be applied on to the primed surface within 2 hours of primer application. If the primer is left exposed for longer than 2 hours on the concrete surface it must be removed and re-applied prior to continuing.

STEEL REINFORCEMENT PRIMER

- 3.1 Following removal of all defective concrete, any partially exposed reinforcing bars shall be fully exposed to a depth of 20mm behind the bar.
- 3.2 If the bar has lost more than 20% of its original diameter then it should be replaced and the Structural Engineer must be consulted.
- 3.3 Where the original reinforcement is retained it must be cleaned to a standard surface purity of Sa 2.5 for chloride contaminated concrete and Sa 2.0 for carbonated concrete. This is best achieved by wet blasting or abrasive blasting.
- 3.4 If chloride contamination is present then high pressure wet blasting is the only acceptable method of cleaning. Priming of reinforcement is generally not required.
- 3.5 If the steel will be exposed to the atmosphere for several days after cleaning then priming using a slurry of the following mix ratio shall be applied:
 - BluCem API0 1 part by weight
 - Water 4 parts by weight
 - Cement 2.5 parts by weight

CURING COMPOUND APPLICATION

- 4.1 Thoroughly mix 1 Part BluCem API0 with 4 parts water to create a coating ready for application.
- 4.2 For fresh concrete apply as soon as possible after final trowelling, just after the disappearance of surface bleed water for maximum water retention (approximately 1-2 hours depending on the ambient temperature and atmospheric conditions). For repair mortars and construction grouts apply after the final set or immediately after the formwork has been removed if formwork is used.
- 4.3 All exposed surfaces must be coated with the curing compound.
- 4.4 Apply one coat at an even coverage rate in accordance with this data sheet. Ensure the concrete surface is completely free of stains, oils, form coatings to obtain good adhesion of BluCem API0 and to avoid discolouration or uneven surface effects.
- 4.5 Do not apply when substrate and/or ambient temperature is below 10°C or above 35°C.

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Product Data

Please refer to Important Notice on following page

Packaging	5kg and 20kg
Diluted Coverage for Primer Curing Compound	6.0 - 8.0m ² /litre (diluted product) 5.0 - 5.5m ² /litre (diluted product)
Water Addition	4 parts water : 1 part BluCem API0

TESTED CHARACTERISTIC	RESULT
Specific Gravity	1.01g/cm ³ (diluted product)
Solids Content	25% (diluted product)
Drying Time	~2 - 3 hours @ 20°C
Application Temperature	>10°C



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