

BluCem RMX LH60

DEEP POUR NON SHRINK GROUT

BluCem RMX LH60 is a ready mix product which arrives pre-mixed in concrete agitators to form a deep pour, non shrink grout/micro concrete

BluCem RMX LH60 is a pumpable, deep pour product suitable for civil engineering applications. BluCem RMX LH60 incorporates specially graded aggregates and advanced cement additives to form a micro concrete which is Class C dual shrinkage compensated, low heat reacting, alkali-silica reaction free, ultra low permeability.

Application Advantages

- Non-shrink - ASTM C1090
- Greater than 60MPa
- Long pump life
- Slump/flow 650mm
- Compatible with deep pour applications
- Compatible with fly ash

Lifecycle Advantages

- Significant time savings
- Decreases construction timelines
- Consistent, high quality mixes
- Continuous placement
- Undertake projects of all sizes

About the Product

BluCem RMX LH60 creates low exothermic heat during hydration through its use of slower reacting cements and specially selected aggregates. This allows the product to remain cool during placement of large pours. Being fully shrinkage compensated and low exothermic heat generating makes BluCem RMX LH60 suitable for a range of deep pour applications where low heat is necessary to protect surrounding services and minimise thermal shrinkage.

Application Solutions

- Concrete repair
- Footings
- Columns and slabs
- Deep pouring of beam and columns
- Pile grouting
- Void grouting

Project Specification Clause

DEEP POUR ENGINEERED MICRO CONCRETE - The deep pour micro concrete used for this project shall be a ready mix grout mixed and batched at a concrete plant delivered in concrete agitators ready to use on site. The product must have independent testing to validate the performance outlined in the technical data table on the following pages. BluCem RMX LH60 manufactured by Bluey Technologies or equivalent shall be accepted.

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Application Specification

CONCRETE PREPARATION

- I.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.
- I.2 Host concrete must be roughened and aggregate exposed to ensure good bond. Removal of laitance is important to ensuring good bond. Shot-blasting, scarification, mechanical chipping or high pressure water blasting may be used to achieve a recommended minimum CSP3 surface finish. It is important to select a preparation method which is considerate to the application environment, host concrete, and surface finish requirements. The correct balance between roughening the surface and not causing further micro-cracking and damage should be trialled and assessed using adhesion test methods following initial preparation trials.
- I.3 All surfaces must be free of dust, oils and surface contaminants. This may require steam cleaning or high pressure water blasting.
- I.4 Priming using BluCem API0 is recommended. Priming by saturation of the surface using potable water prior to application is also acceptable. Priming with epoxy primers or other products which prevent vapour transmission is not recommended.

PUMPING

- 2.1 Once the grout has been mixed and delivered you need an effective pumping method to deliver it to the area of application. Bluey Technologies are able to recommend the right mixer for your project.
- 2.2 Prior to pumping grout, rinse the mixer and charge the pump hopper with sufficient water to flush and cool the pump and all grout lines thoroughly. Check to ensure that all lines and hoses are clear and unobstructed. Once grout is mixed, it is important to keep it agitated continuously prior to pumping. Although, this product has a long pot life, if the grout is allowed to sit then it will 'gel' and may become more difficult to pump.
- 2.3 Once the site is ready for grout placement, commence pumping. It is important to pump continuously and avoid the formation of cold joints.
- 2.4 Following completion, dispose of excess production material in consideration of the environment. Carefully wash out the pump and agitators into the pump hopper and pump the resulting washout material through the grout hoses to a suitable disposal site. Drain any water out of the lines and hoses. Clean down the machinery and surrounding areas.

APPLICATION TEMPERATURES

- 3.1 The mix water's temperature should be kept as low as possible to prevent the grout from hydrating too rapidly.
- 3.2 As with the water temperature, the higher the air temperature the more quickly the grout hydrates and sets. Bluey Technologies specify mixing times and set times at an ambient temperature of 20°C. These times vary with temperature fluctuations, and adjustments will be required to compensate for this. Exposing the pumping hoses to the sun on a hot day accelerates the product's set time. In some cases it may be necessary to cool the material, the mix water, or even the hose itself during the process and pre-planning the storage of all materials to keep the temperature as low as possible.
- 3.3 It is estimated that every 10°C increase in temperature will halve the product set time. Likewise every 10°C reduction will double the set time. These set time variances may have detrimental consequences for the final set product and Bluey Technologies should be consulted where extreme temperatures are anticipated.

APPLICATION

- 4.1 BluCem RMX LH60 may be poured or pumped into place. Do not exceed the maximum application thicknesses specified in the data sheet for any wet layer. Consult Bluey Technologies for further information about aggregate addition for large volume pours.

CURING

- 5.1 It is recommended that the final surface finish layer is coated with curing compound or otherwise maintained wet for at least three days.

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Product Data

Please refer to Important Notice on following page

Supply	Wet mix per m ³ delivered to site
Water Addition	Maximum 230 litres/m ³
Application Thickness	Refer to Bluey Technologies for advice and approval on pour thicknesses with dimensions exceeding 250mm
Pump Life	120 minutes @ 20°C
Maximum Particle Size	5mm

		SYD - METRO	MELB - METRO	BRIS - METRO
TESTED CHARACTERISTIC	STANDARD	RESULT		
Portland Cement	AS3972	✓	✓	✓
Aggregates	AS2758.0	✓	✓	✓
Compressive Strength	AS1478.2 Appendix A	>70 MPa @ 28 days		
Chloride Content	AS1012.20	<0.01%		
Early Volume Change	AS1478.2 Appendix E	1.7% @ 60 minutes		
Change in Height	ASTM C1090	+0.04% @ 28 days	+0.03% @ 28 days	0.00% @ 28 days
Drying Shrinkage	AS1478.2	<650µStrain @ 28 days	<650µStrain @ 28 days	<770µStrain @ 28 days
Electrical Resistivity	Taywood-Warner 4 Probe	625mm	375mm	450mm
Setting Time	AS1012.18	Initial 590 min Final 670 min		

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Contact Bluey

HEAD OFFICE QLD

1300 0 BLUEY | qld@bluey.com.au

bluey.com.au

NSW

nsw@bluey.com.au

VIC

vic@bluey.com.au

SA

sa@bluey.com.au

WA

wa@bluey.com.au

TAS

tas@bluey.com.au

ACT

act@bluey.com.au

NT

nt@bluey.com.au

NZ

nz@bluey.com.au

UK/EUROPE

bluey@bluey.ie

ASIA PACIFIC

sales_sg@quicseal.com

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