

BluCem RMX HS80

NON SHRINK CONSTRUCTION GROUT

BluCem RMX HS80 is a ready mix product which arrives pre-mixed in concrete agitators on site to form a high strength cementitious grout.

BluCem RMX HS80 is a highly fluid, volumetrically stable, Class C grout which has both early and long term shrinkage compensating additives. This allows grout to be placed in critical applications and ensures the elimination of shrinkage cracking or settlement. BluCem RMX HS80 has been formulated to ensure that expansion is compensated in both the plastic and drying stages.

Application Advantages

- Non-shrink - ASTM C1090
- Greater than 70MPa
- Maximum particle size of 1mm
- Slump/flow >650mm
- Zero bleed

Lifecycle Advantages

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

About the Product

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Application Solutions

- Structural grouting
- Pile jacket grouting
- Annulus grouting

Project Specification Clause

FLUID NON-SHRINK CONSTRUCTION GROUT - The high strength cementitious grout 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. 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 RMX HS80 manufactured by Bluey Technologies or equivalent shall be accepted..

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Application Specification

PUMPING

- 1.1 Once the grout has been mixed you need an effective pumping method to deliver it to the area of application. Various models of batch mixers and continuous mixers are available for use, all with varying specifications. It is important to match your application's specifics with the capabilities of the mixer and pump. Bluey Technologies are able to recommend the right mixer for your project.
- 1.2 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.
- 1.3 Once the site is ready for grout placement, commence pumping. It is important to pump continuously and avoid the formation of cold joints.
- 1.4 Following completion, dispose of excess production material in consideration of the environment. Carefully wash out mixer tanks 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

- 2.1 The mix water's temperature should be kept as low as possible to prevent the grout from hydrating too rapidly.
- 2.2 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.
- 2.3 High-shear mixing can add 1 to 2°C per minute of mixing. In order to minimise this effect, add all ingredients to the mixer as quickly as possible and minimise prolonged batch-mixing procedures.
- 2.4 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

- 3.1 BluCem RMX HS80 may be poured or pumped into place. Check ducts and forms for leaks prior to mixing and application of grout. Mix at low speed during pumping and placement to maintain work life. High speed mixing should be avoided during placement to prevent temperature rise of the mixed grout.

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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 100mm
Pump Life	90 minutes @ 20°C
Maximum Particle Size	1.0mm

TESTED CHARACTERISTIC	STANDARD	SYD - METRO	MELB - METRO	BRIS - METRO
		RESULT		
Portland Cement	AS3972	✓	✓	✓
Aggregates	AS2758.0	✓	✓	✓
Compressive Strength	AS1478.2 Appendix A	>75 MPa @ 28 days	>80 MPa @ 28 days	>75 MPa @ 28 days
Early Volume Change	AS1478.2 Appendix E	1.6% @ 90 minutes	1.7% @ 60 minutes	1.9% @ 60 minutes
Change in Height	ASTM C1090	+0.05% @ 28 days	+0.06% @ 28 days	0.08% @ 28 days
Flow Trough	AS 1478.2 Appendix 2	385mm	445mm	310mm
Dry Shrinkage	AS 1478.2 Appendix B		<700µStrain	<800µStrain
Setting Time	AS1012.18	Initial 240 min Final 310 min		

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