

MasterFlux 80RMX (formerly BluCem RMX HS80)

High strength Non shrink ready mix grout

Material Description

MasterFlux 80RMX is a ready-mix, high-strength cementitious grout delivered pre-mixed in concrete agitators for on-site application. It is a highly fluid, volumetrically stable, Class C grout with early and long-term shrinkage-compensating additives. These properties make it ideal for critical applications, preventing shrinkage cracking or settlement. **MasterFlux 80RMX** is specifically formulated to compensate for expansion in both the plastic and drying stages, ensuring durability and stability.

Areas of Application

- Structural grouting – provides high-strength support for structural elements.
- Pile jacket grouting – ensures durable and stable encasement of piles.
- Annulus grouting – fills voids efficiently, preventing settlement and shrinkage.

Characteristics and Benefits

- High strength – achieves compressive strengths greater than 70 MPa.
- Highly fluid – ensures easy placement with a slump/flow of >650mm.
- Volumetrically stable – Class C grout with early and long-term shrinkage compensation.
- Non-shrink – compliant with ASTM C1090, preventing shrinkage cracking or settlement.
- Zero bleed – prevents segregation and ensures uniform performance.
- Fine particle size – Maximum particle size of 1mm for smooth, consistent application.
- Time-efficient – reduces construction timelines with quick and continuous placement.
- Durability – engineered to compensate for expansion in both plastic and drying stages.

Properties

	Sydney Metro	Melbourne Metro	Brisbane Metro
Tested Characteristic / Standard	Result		
Portland Cement AS3972	✓	✓	✓
Aggregates AS2758.0	✓	✓	✓
Compressive Strength AS1478.2 Appendix A	>75MPa @ 28 days	>80MPa @ 28 days	>75MPa @ 28 days
Early Volume Change AS1478.2 Appendix #	1.6% @ 90 minutes	1.7% @ 90 minutes	1.9% @ 60 minutes
Change in Height @ 28 days ASTM C1090	+0.05% @ 28 days	+0.06% @ 28 days	+0.08% @ 28 days
Flow Trough AS1478.2 Appendix 2	385mm	445mm	310mm
Drying Shrinkage AS1478.2 Appendix B		<700µ Strain	<800µ Strain
Setting Time AS1012.18	Initial 240 min Final 310 min		

Application Properties	Results
Water Addition	Maximum 230 litres/m ³
Application thickness	Refer to Master Builders Solutions for advice and approval on pour thicknesses with dimensions exceeding 250mm
Pump life @ 20°C	90 minutes
Maximum particle size	1.0mm

Application

For information about application, please obtain a copy of the “**Cementitious Grouts MasterFlux range**” application guide from your local Master Builders Solutions Technical Sales Representative or download a copy from the website.

MasterFlux 80RMX may be poured or pumped into place. Check ducts and forms for leaks prior to mixing and application of grout.

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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.

Pumping

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. Master Builders Solutions are able to recommend the right mixer for your project.

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. Once the site is ready for grout placement, commence pumping. It is important to pump continuously and avoid the formation of cold joints.

Application Temperatures

The mix water's temperature should be kept as low as possible to prevent the grout from hydrating too rapidly.

As with the water temperature, the higher the air temperature the more quickly the grout hydrates and sets. Master Builders Solutions 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.

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.

Packaging

MasterFlux 80RMX is delivered to site as wet mix per m³.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website.

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. MasterFlux 80RMX manufactured by Master Builders Solutions or equivalent shall be accepted..

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Disclaimer

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STATEMENT OF RESPONSIBILITY

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