

MasterFlux EA 55RMX

Low Thermal Resistivity ready mix grout

Material Description

MasterFlux EA 55RMX is a one-component powder additive designed for use in a specified mix at an approved batch plant to produce a highly fluid, heat-dissipating cable grout. It is specifically formulated for deep-pour applications, effectively dissipating heat from high-voltage cables through conduit encasement.

With its pumpable consistency, **MasterFlux EA 55RMX** is well-suited for long-distance and bulk grouting where heat management is critical. By incorporating slower-reacting cements and thermally conductive additives, it generates low exothermic heat during mixing, allowing for controlled placement in large pours while maintaining thermal stability. This ensures efficient heat transmission throughout its service life, protecting surrounding infrastructure and minimising thermal shrinkage.

Areas of Application

MasterFlux EA 55RMX is designed for applications that require heat dissipation and high fluidity. Its key areas of application include:

- High-voltage cable grouting – used in conduit encasement to dissipate heat from power cables.
- Deep pour grouting – suitable for large-volume placements where low heat generation is required.
- Bulk grouting – ideal for ready-mix applications that demand controlled thermal properties.
- Long-distance pumping – its high fluidity allows for efficient placement over extended distances.
- Infrastructure protection – used in environments where low exothermic heat helps prevent damage to surrounding services.
- Thermally conductive applications – ensures effective heat transfer in power transmission and industrial settings.

Characteristics and Benefits

- Highly fluid & pumpable – allows for easy placement, including long-distance pumping.
- Deep pour capability – suitable for bulk applications without excessive heat buildup.
- Low exothermic heat generation – minimizes thermal shrinkage and protects surrounding services.
- Thermally conductive additives – enhances heat dissipation for cable grouting applications.
- Controlled setting & strength – ensures long-term performance and durability.
- Optimized for high-voltage cable grouting – effectively dissipates heat in conduit encasement.
- Prevents thermal damage – reduces risks associated with heat buildup in large pours.

Properties

	Sydney Metro	Melbourne Metro	Brisbane Metro
Tested Characteristic / Standard	Result		
Thermal Resistivity IEEE Standard 442	Km/W (Dry)		
7 days	66	72	83
28 days	52	62	75
56 days		66	
Compressive Strength AS 1478.2- Appendix A			
24 hours	10MPa		
7 days	25MPa		
28 days	30MPa		
Flow Through AS 1478.2 APP-D	> 500mm		
Bleeding ASTM C940	Zero @ 13%w/r		
Setting Time AS 1012.18	Initial set - 6 hours Final set - 10 hours		
Separation	Nil		
Slump Flow @ 13%	700mm	> 690mm	> 690mm

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Application Properties	Results
Pump life @ 20°C	> 180 minutes
Maximum Exotherm	70°C
Maximum Particle Size	1mm

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.

Formwork Stop-End

Each end of the main case must be sealed water tight prior to grouting. The stop-end may be constructed using a combination of timber plywood supporting appropriate cementitious or polyurethane foam plugs sufficient to resist the depth of grout pouring.

The timber plywood shall then be cut to shape to tightly fit the conduit configuration and secured using timber supports. Polyurethane foam may be used to fill remaining holes and defects prior to and during grouting operations. It is recommended that the case is filled with water to test for leakage prior to grouting.

Pumping & Placement

Install multiple grouting lines at the top (obvert) of the bore from the high end to ensure grouting from bottom up of the under bore if on a gradient. The grout lines should be installed at the following intervals to allow for easy grouting of if any grout lines get blocked.

Minimum Intervals: 90%, 75%, 50% and 25% (More intervals can be added but we recommend the previous as a minimum). Breather tube to be placed at the top of the under bore, once consistent grout return has occurred through the breather tube stop grouting and cap off.

It is recommended that grouting operations progress slowly and careful observation for leaks is made continuously. Grouting operations must cease immediately if a leak is observed. The leak shall be plugged with suitable plugging products.

At the completion of grouting, the end of the breather tube shall be secured at least 1m above the conduit obvert. The breather tube shall be monitored until the grout reaches initial set for falls in grout level. If the grout level falls 1m, then the leak shall be identified and stopped. The breather tube shall be continuously topped up until the grout reaches initial set. Where grouting operations are not continuous, then multiple breather tubes for grout placement may be required.

Curing

No special curing techniques are required.

Packaging

MasterFlux EA55RMX 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

Low Thermal Resistivity Grout - The deep pour grout used for this project shall comprise of cement powder and powder additive which requires only the addition of water to form a durable deep pour product. It shall be a pre-blended additive added to a specific blend of cements and aggregates that has independent testing to validate the performance outlined in the technical data table on the following pages. MasterFlux EA55RMX manufactured by Master Builders Solutions or equivalent shall be accepted.

MasterCrete EA 55RMX

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Disclaimer

MasterFlux EA55MX-ANZ-V2-1125

STATEMENT OF RESPONSIBILITY

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