

MasterFlux 200 (formerly BluCem HS200)

Post-tension cable grout

Material Description

MasterFlux 200 is a high strength, pumpable grout specifically designed for civil engineering projects requiring durability and reliability. This advanced cementitious grout is formulated without aluminates, metallic expansion agents, or methocel-based additives, making it ideal for protection of high tensile steel elements.

Incorporating state-of-the-art superplasticisers and suspension agents, **MasterFlux 200** delivers exceptional fluidity and performance. Its innovative formulation ensures complete encapsulation of post-tension cables, preventing bleed, segregation, or voids, even in critical applications.

Areas of Application

- Post-tension cable grouting - ensures complete encapsulation and protection of steel cables.
- Rock bolting - provides reliable anchorage in rock stabilization projects.
- General grouting - suitable for filling voids and enhancing structural integrity.
- Soil and rock grouting - improves ground stability and reduces permeability.
- Rock fissure grouting - effectively seals fractures in rock formations.
- Precast grouting - ensures strong, durable connections in precast concrete construction.
- Sand permeation - used for consolidating loose sandy soils.

Characteristics and Benefits

- High compressive strength - provides exceptional load-bearing capacity for demanding applications.
- Non-shrink properties - ensures dimensional stability and eliminates voids for long-term durability.
- Excellent flowability - easily placed in complex or congested areas.

- High durability - resistant to chlorides, sulphates, and freeze-thaw cycles, ensuring reliable performance in harsh environments.
- Pre-blended - supplied as a single-component material, requiring only water for consistent mixing and application.
- Versatile applications - suitable for structural grouting, void filling, anchoring, and critical repairs.
- Long-term performance - minimizes maintenance costs with enhanced longevity and robust design.

Properties

Tested Characteristic / Standard	Result		
Compressive strength AS 1478.2- Appendix A	Liter Water per 20 kg		
	6.0 L	6.6 L	7.2 L
24 hours: MPa	40	30	20
7 days: MPa	90	80	70
28 days: MPa	100	90	80
Bond Strength (by pull off)	0.5 - 1.0MPa unprimed concrete 0.8 - 1.5MPa primed concrete		
Chloride Content AS 1012.20	<0.01%		
Expansion ASTM C940	<0.2% @ 30% water		
Change in Height ASTM C1090	<0.18% @ 28 days		
Bleeding ASTM C940	Zero @ 30% water		
Setting Time AS 1012.18	Initial set – 240 minutes Final set – 300 minutes		
Fresh Wet Density AS 1012.5	2100kg/m ³ @ 30% water 2000kg/m ³ @ 36% water		
Flow Characteristics AS 1478.2 Appendix C	5-20 seconds (flow cone)		
Change in Flow Characteristics AS 1478.2 Appendix C	<3.0 seconds change in 45 minutes		
Modulus of Elasticity AS 1012.17	22.4 GPa		
Post Tensioning Requirements RMS R64	Complies		

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Application Properties	Results
Water addition	6.0 – 7.2 litres per 20kg
Yield	12.2 litres per 20kg @ 30% water 12.8 litres per 20kg @ 33% water 13.4 litres per 20kg @ 36% water
Pump Life	60-120 minutes
Thickness range (mm)	Refer to Master Builders Solutions for advice and approval on pour thicknesses exceeding 100mm
Maximum particle size	45 microns

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 200 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.

Mixing

Measure and place approximately 90% of the desired water into the approved mixing vessel. Start mixer and slowly add **MasterFlux 200**.

Mix at high speed for a further 3 - 4 minutes to adequately dissolve the **MasterFlux 200** and achieve flowable consistency. Additional water can be added to a total volume not exceeding the total allowable limit.

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.

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.

Estimating Data

One 20kg bag will yield approximately 12.2 – 13.4 litres :

MasterFlux 200			
20kg powder	Thickness in mm /m ²	m ³	bags /m ³
30% water	12.2	0.0122	82
33% water	12.8	0.0128	78
36% water	13.4	0.0134	75

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Packaging

MasterFlux 200 is available in 20kg and bulk bags. Consult Master Builders Solutions for bulk supply or Ready mixed options.

Storage & Shelf Life

Store in cool and dry warehouse conditions. Shelf life in these conditions is 12 months in unopened original bags.

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

PT CABLE GROUT - The ultra flow cementitious grout shall be a one component powder product which requires only the addition of water to form a durable ultra flow 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. The grout shall be free of aluminium and metallic expansion agents and methocel additives. MasterFlux 200 manufactured by Master Builders Solutions or equivalent shall be accepted.

Disclaimer

MasterFlux-200-ANZ-VI -0325

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