MasterFlux 810

Non-shrink, precision cementitious grout for use in general civil engineering works

Material Description

MasterFlux 810 is a ready to use, non-shrink, natural aggregate cementitious precision grout for use in general civil engineering works. MasterFlux 810 provides extended working life and high early and ultimate strengths.

Areas of Application

All precision, non-shrink grouting applications with clearances between 10mm and 100mm or more including:

- Critical equipment baseplates, soleplates and columns.
- Precast wall panels, beams, columns, structural building members and curtain walls.
- Patching poured in place concrete structures e.g. honeycombing, using preplaced aggregate techniques.
- Underpinning
- Anchoring dowels, bolts and other fixings.
- Applications requiring high early compressive strengths and high ultimate compressive strengths.

Characteristics and Benefits

- High strength – provides good early and ultimate strengths which ensure quick return to service and long term durability.
- Non shrink – hardens free of bleeding, settlement and drying shrinkage when placed at flowable consistency.
- Flowable consistency – ensures complete filling of even intricate voids often without the need for pumping and strapping.
- Ample working time – remains placeable up to 1 hour, even at high ambient temperatures
- Dense, impermeable grout – provides a good watertight seal.
- Economical – greater volumes of grout can be mixed and handled with less labour.
- Easy to use – requires no special mixing equipment, it can be mixed in a standard concrete mixer or in a pail using a grout stirrer.
- No added chloride – does not add to chloride load on structure.
- Strict quality control – ensures reliable and consistent product performance.
- Provides complete non-shrink performance – when tested in accordance with simulated Bedplate Technique.
- Compliance with codes – meets the non-shrink requirements of ASTM C1090 and CRD-C 621, Corps of Engineers Specification for Non Shrink Grout; tested to the requirements of AS1478.2 "Methods of sampling and testing admixtures for concrete, mortar and grout".

Properties

	Plastic	Flowable
Compressive strength		
1 day	45 MPa	25 MPa
3 days	50 MPa	42 MPa
7 days	60 MPa	55 MPa
28 days	80 MPa	65 MPa

Note: Tested using cubes of size: 50mm x 50mm x 50mm, restrained for 24 hrs, cured by immersion in water.

Flow Retention

Flow retention when placed at 'flowable' consistency at 23°C.

Age at Test	Flow	Retention
Initial	47cm	100%
After 30 minutes	35cm	90%
After 1 hour	24cm	75%

Test Method: AS1478.2 Appendix D

Bleeding, Plastic Density and Setting Time

Plastic properties when placed at 'flowable' consistency at 23°C

Bleeding (AS1012.6)	none
Plastic Density (AS 1012.5)	2145
Setting times (AS 1012.18)	
Initial	5 hours
Final	6.5 hours

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Volume Change

Volume change when placed at 'flowable' consistency at 23°C.

Age at Test	Volume Change
1 day	Positive
3 days	Positive
7 days	Positive
28 days	Positive

Test Method: ASTM C1090 (CRD-C621)

VOC content: 3g/L	Test method: SCAQMD 304-91

NOTE: The data shown is based on controlled laboratory tests. Reasonable variations from the results shown can be expected. Field and laboratory tests should be conducted on the basis of the desired placing consistency rather than strictly on indicated water demand. If the project requires that strength tests be made on site do not use cylinder moulds. Compressive strength should be determined in 50mm cube moulds fitted with compression cover plates in accordance with AS 1478.2 Appendix A.

Application

For application directions on preparation, forming, mixing, placing and curing **MasterFlux 810**, as well as the precautions to take in hot and cold weather, refer to "Application Guide for MasterFlux Cementitious Precision Grouts" available from your local Master Builders Solutions Technical Sales Representative. **MasterFlux 810** is not suitable for situations requiring a dry pack grout. For situations requiring 'dry pack' (damp pack) application, **MasterFlux 700** is suitable.

MasterFlux 810 can be mixed to either a plastic or flowable consistency. The quantity of water required for a 20 kg bag is approximately 2.46 litres for plastic and 3.6 litres for flowable consistency.

Water addition may be affected by temperature conditions on site. Trials are recommended to determine the correct water requirement. Do not use water at a temperature or volume that causes the grout to bleed or segregate.

MasterFlux 810 should be used within 30 minutes of mixing.

Estimating Data

A 20kg bag of **MasterFlux 810** when mixed to a flowable consistency will yield the following volume:

Flowable: 3.6 litres water Yield: 11 litres grout

MasterFlux 810				
L	Thickness in mm /m^2	m^3	kits /m^3	m^2/mm thickness
11	11mm	(0.0011)	91	11 m^2

Packaging

MasterFlux 810 is packaged in 20kg multi-ply paper bags.

Storage & Shelf Life

MasterFlux 810 has a shelf life of 12 months when stored in a cool dry place in unopened 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.

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Disclaimer

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