

MasterFlow[®] 810

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

DESCRIPTION

MasterFlow 810 is a ready to use, non-shrink, natural aggregate cementitious precision grout for use in general civil engineering works.

MasterFlow 810 provides extended working life and high early and ultimate strengths.

RECOMMENDED USES

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 replaced aggregate techniques.
- Underpinning.
- Anchoring dowels, bolts and other fixings.
- Applications requiring high early compressive strengths and high ultimate compressive strengths.

FEATURES 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

	Flowable
Compressive strength	
1 day	25 MPa
3 days	42 MPa
7 days	55 MPa
28 days	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

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
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We create chemistry

MasterFlow® 810

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 **MasterFlow 810**, as well as the precautions to take in hot and cold weather, refer to “Application Guide for MasterFlow Cementitious Precision Grouts” available from your local BASF Construction Chemicals representative. **MasterFlow 810** is not suitable for situations requiring a dry pack grout. For situations requiring ‘dry pack’ (damp pack) application, **MasterFlow 700** is suitable.

MasterFlow 810 can be mixed to a flowable consistency. The quantity of water required for a 20 kg bag is approximately 3.6 litres.

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.

MasterFlow 810 should be used within 30 minutes of mixing.

CLEANING

Clean tools and equipment with water before **MasterFlow 810** has hardened, otherwise mechanical cleaning will be required.

ESTIMATING DATA

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

Flowable: 3.6 litres water Yield: 11 litres grout

MasterFlow 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

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

SHELF LIFE

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

PRECAUTIONS

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

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this BASF publication are based on the present state of our best scientific and practical knowledge. As the information herein is of a general nature, no assumption can be made as to a product's suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by law. The user is responsible for checking the suitability of products for their intended use.

NOTE

Field service where provided does not constitute supervisory responsibility. Suggestions made by BASF either orally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they, and not BASF, are responsible for carrying out procedures appropriate to a specific application.

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