BASF
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MasterFlow® 810

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

DESCRIPTION

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

FIELDS OF APPLICATION

MasterFlow 810 is recommended for:

- Stanchion baseplates and columns
- Prefabricated concrete panels and beams
- Bridge bearing plates
- Anchor bolts and bars
- Underpinning
- Patch repair works

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 pail using a grout stirrer.
- **No added chloride -** Does not add to chloride load on structure.
- **Provides complete non shrink performance -** When tested in accordance with simulated Bedplate Technique.
- **Versatile -** Can be placed from flowable to trowelable consistency

PROPERTIES

Compressive Strength	Flowable	Trowelable
1 day	25 N/mm^2	45 N/mm^2
3 days	50 N/mm^2	60 N/mm^2
7 days	55 N/mm^2	65 N/mm^2
28 days	65 N/mm^2	85 N/mm^2
Estimate Setting Time		
Initial	5:30 hours	
Final	6:30 hours	

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

Supply form	Powder
Colour	Cement Grey
Water Addition Flowable Trowelable	 18% 12.8 – 13.6%
Density Flowable Trowelable	 2.18 kg/L 2.26 kg/L
Flow through (Flowable)	35 – 55 cm

APPLICATION

MasterFlow 810 can be mixed to a flowable or trowelable consistency. The quantity of water required for a 25 kg bag is approximately as shown below:

- Flowable: 4.5 litres
- Trowelable: 3.2 – 3.4 litres

Water addition may be affected by temperature conditions on site. Trials are recommended to determine the correct water requirement. **MasterFlow 810** should be mixed using a suitable mixer. For flowable consistency, use a hand drill and paddle for small works up to two bags at a time and specialise grout mixers for larger volume. Drum type mixers may not provide sufficient mixing efficiency to derive the optimum performance from the grout.

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The correct volume of water should be added to the mixer followed by the powder. Mixing should continue until the grout has a smooth, lump free appearance. This will normally be between 3 – 5 minutes after mixing has started.

For best results, **MasterFlow 810** should be used within 30 minutes once mixed.

The substrate should be properly prepared and should be free from contamination, laitance and loose material. Thoroughly saturate the substance with water at least 2 – 3 hours prior to pouring the grout. All free water ponding should be blown out of the void just before pouring the grout.

As for all cementitious materials, curing is essential to prevent rapid drying out of the grout and shrinkage caused by the water loss. Curing should be effected by accepted methods such as curing compounds, polythene sheet, wet hessian or water ponding. If a shaped shoulder is required, it should be formed before the grout has reached its final set. Carefully remove the formwork once the **MasterFlow 810** is self-supporting and cut the shape of the shoulder with a trowel. Preferably the shoulder should be cut to a 45° angle to minimise stresses.

CLEANING

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

ESTIMATING DATA

A 25 kg bag **of MasterFlow 810** when mixed to a flowable or trowelable consistency will yield the following volumes:

Flowable

Add 4.5 litres water Yield: 13.5 litres grout

Trowelable

Add 3.4 litres water Yield: 12.5 litres grout

PACKAGING

MasterFlow 810 is packaged in 25kg multi-ply paper sacks.

SHELF LIFE

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

PRECAUTIONS

For detailed Health, Safety and Environmental recommendations, please refer to and follow all instructions on the product Material Safety Data Sheet (MSDS) from our office or our website.

BASF Construction Chemicals Asia Pacific
33 Tuas Avenue 11
Singapore 639090

Tel: +65 68616766

Website: www.master-builders-solutions.asiapacific.basf.com