



The Chemical Company

MASTERFLOW[®] 810 (formerly known as Construction Grout)

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.

RECOMMENDED FOR

MASTERFLOW 810 is recommended for:

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

FEATURES AND BENEFITS

- A flowable and self levelling grout
- Able to fill intricate voids
- Low water / cement ration
- Increased durability
- Dual expansion systems in plastic and hardened phases
- Ready to use
- Chloride free
- Compatible with Portland cement concrete
- Can be used over a wide range of water additions

TYPICAL PERFORMANCE DATA

<u>Compressive strength</u>	Flowable	Trowellable
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	80 N/mm ²

Estimate setting time

Initial : 5:30 hr

Final : 6:30 hr

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

Flexural strength (28 days) : 3.5 N/mm²

PROPERTIES

Supply form	: Powder
Colour	: Cement grey
<u>Water addition</u>	
Flowable	: 18 %
Trowellable	: 12.8 – 13.6 %
<u>Density (wet)</u>	
Flowable	: 2.18 kg/L
Trowellable	: 2.26 kg/L
Flow trough (cm), Flowable	: 35 - 55

WATER ADDITION

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

Flowable	: 4.5 litres
Trowellable	: 3.2 – 3.4 litres

Water addition may be affected by temperature conditions on site. Trials are recommended to determine the correct water requirement.

Mixing

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.

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.

APPLICATION

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.

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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 and trowellable consistency with different quantities of aggregates (eg. Aggregate density = 2.6), will yield the following volumes:

	Nil Aggregate	13 kg aggregate	25 kg Aggregate
Flowable: @ 4.5L of water	13.5 L	18.5 L	23.1 L
Trowellable: @ 3.4L of water	12.5 L	17.5 L	22.1 L

Do not use water in an amount or at a temperature that will cause the mixed grout to bleed excessively or segregate.

PACKAGING

MASTERFLOW 810 is supplied in 25 kg in multi-ply paper sacks

SHELF LIFE

MASTERFLOW 810 has a shelf life of 12 months if stored in a dry, cool place in unopened bags.

PRECAUTIONS

For detailed Health, Safety and Environmental Recommendations, please consult and follow all instructions on the product Material Safety Data Sheet.

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STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this **BASF Construction Chemicals** 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

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