

# MasterFlow<sup>®</sup> 718

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

## DESCRIPTION

**MasterFlow 718** is a ready to use, non-shrink, natural aggregate cementitious grout for use in general civil engineering works. **MasterFlow 718** provides extended working life and high early and ultimate strengths.

## RECOMMENDED USES

**MasterFlow 718** 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

	Flowable
<b>Compressive strength</b>	
1 day	20 N/mm <sup>2</sup>
3 days	35 N/mm <sup>2</sup>
7 days	55 N/mm <sup>2</sup>
28 days	65 N/mm <sup>2</sup>
<b>Flexural strength</b> (ASTM C 78) 28 days	9 MPa
Supply form	Powder
Colour	Cement grey
Water addition	16 %
Density (wet)	2.1 Kg/L
Modulus of Elasticity 28 days	>30 GPa
Pull out Bond strength 7 days	>17 MPa
Bond Strength to concrete 28 Days	>2 MPa
Dynamic load resistance	Condition of sample: undamaged
	Compressive strength: Slightly higher
<i>Specimen subjected to alternating loads of 5 and 25 MPa at 300 cycles per minute and for 2000000 cycles and then tested for compressive strength</i>	

## APPLICATION

**MasterFlow 718** can be mixed to a flowable or trowelable consistency. The quantity of water required to produce a flowable grout from a 25 kg bag is approximately 4.0 litres.

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

**MasterFlow 718** 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 718** 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 718** 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 718** has hardened, otherwise mechanical cleaning will be required.

## ESTIMATING DATA

A 25 kg bag of **MasterFlow 718** when mixed to a flowable consistency (Add 4.0 litres water) will yield 13.2 litres grout.

## PACKAGING

**MasterFlow 718** is packaged in 25 kg moisture resistant bags.

## SHELF LIFE

**MasterFlow 718** has a shelf life of approximately 6 months when stored in a cool dry place in unopened sacks.

## PRECAUTIONS

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

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this Master Builders Solutions 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.

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