

# MasterFlow<sup>®</sup> 815

## Cementitious high strength non-shrink precision grout for deep pour applications

### MATERIAL DESCRIPTION

**MasterFlow 815** is a non-shrink, natural aggregate precision grout for deep pours, formulated to provide ample working time when mixed and placed at a flowable consistency. **MasterFlow 815** contains specially graded natural aggregate and provides high early and ultimate compressive strengths. **MasterFlow 815** is generally used for deep pour applications between 50mm and 500mm.

### AREAS OF APPLICATION

**MasterFlow 815** is used for all precision, non-shrink grouting applications with thick layers and clearances of 50mm or more including:

- Equipment baseplates, sole plates & columns
- Precast concrete panels, beams and columns
- Grouting thick pour applications up to 500mm thick
- Concrete repair applications where a form and pour material is required
- 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
- **Ample working time** – remains placeable even at high ambient temperatures
- **Flowable consistency** - able to pumped with grout pump
- **Non staining** – free of metallic aggregate
- **Complies with codes** – meets requirements of AS1478.2-2005 and the non-shrink requirements of ASTM C1090 and CRD-C 621, Corps of Engineers Specification for Non-Shrink Grout
- **Provides complete non-shrink performance** when tested in accordance with a simulated bedplate technique

### PROPERTIES

#### Strength development

The strength of the grout is often the determining factor in deciding when loads can be put on structural members of machinery. The strength of the grout is dependent on the amount of mixing water, ambient and substrate temperature, curing and age of the hardened grout.

Typical compressive strengths of **MasterFlow 815** placed at a flowable consistency at 23°C.

Age	Strength (MPa)
1 day	24
3 days	40
7 days	52
28 days	63

Test Method: AS 1478.2-2005 Appendix A – 50mm cubes

### Flow Retention

Determined by the flow trough method at 23°C:

Time	Flow	Retention
Initial	43 cm	100%
After 30 mins.	32 cm	74%
After 1 hour	22 cm	51%

Test Method: AS 1478.2-2005 Appendix A.

### Volume Change

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

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

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 demands. If the project requires that strength tests be conducted on site, do not use cylinder moulds. Compressive strengths should be determined in accordance with AS1478.2-2005, Appendix A using 50mm cube moulds with compression covers.

### APPLICATION

For application directions on preparation, forming, mixing, placing and curing **MasterFlow 815**, 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 Master Builders Solutions Technical Sales Representative or our website. **MasterFlow 815** is not suitable for situations requiring 'dry pack' (damp pack) application. **MasterFlow 700** is suitable for these applications.

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## ESTIMATING DATA

20kg of **MasterFlow 815** mixed to a flowable consistency produces approximately 10.0 litres of grout.

MasterFlow 815				
L	Thickness in mm /m <sup>2</sup>	m <sup>3</sup>	bags /m <sup>3</sup>	m <sup>2</sup> /mm thickness
10	10mm	(0.0010)	100	10 m <sup>2</sup>

**MasterFlow 815** is designed to be placed at a consistency which will give 40-45cm lateral flow in the flow trough (flowable) when tested to AS1478.2-2005, Appendix D.

As a guide, 20kg of **MasterFlow 815** mixed at 23°C requires approximately 2.5 litres of water to provide the recommended lateral flow when using a grout pump or paddle type mixer. When using a hand held grout stirrer, this water demand may be slightly increased.

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

## PACKAGING

**MasterFlow 815** is packaged in 20kg moisture resistant bags.

## SHELF LIFE

**MasterFlow 815** has a shelf life of 12 months when stored in a cool dry environment in original unopened bags. The expiry date is printed on each bag of product.

## 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.

## DISCLAIMER

MasterFlow-815-ANZ-V9-0121

### STATEMENT OF RESPONSIBILITY

The technical information and application advice given in this MB Solutions Australia Pty Ltd 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 and for ensuring that the application and use of the product is in accordance with the manufacturer's guidelines and recommendations.

### NOTE

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

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