



Specialist Construction Supplies for Repair, Maintenance, Building & Infrastructure

## Masterflow 885 Data Sheet

### Specification notes

Product: **Masterflow 885**

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# MasterFlow 885

## High Strength Metallic Aggregate Reinforced Non-Shrink, Non Catalysed Grout with Load Bearing Properties

### DESCRIPTION

MasterFlow 885 is a ready to use product in powder form, which requires only the on-site addition of water to produce a non-shrink, metallic reinforced grout. Use of specially processed malleable metallic aggregate improves impact and dynamic loading resistance compared with normal cementitious grouts.

### FIELD OF APPLICATION

MasterFlow 885 is formulated for use at any consistency from fluid to damp-pack, and may be used with confidence for grouting and precision bearing operations where shrinkage must be eliminated to achieve full bedding and load transfer.

- Rail tracks, crane rails.
- Turbines, generators and compressors.
- Rolling, stamping, drawing and finishing mills.
- Paper machine soleplates.
- Anchor bolts and rods.
- For all heavy duty grouting applications.

### FEATURES AND BENEFITS

- Meets the compressive strength and non-shrink requirements of CRD-C 621, Corps of Engineers Specification for Non-shrink Grout.
- Hardens free of bleeding, settlement or drying shrinkage when mixed, placed and cured at any consistency - fluid, flowable, plastic or damp pack.
- Can be used at temperatures ranging from as high as 40°C to as low as 4°C when mixing and placing recommendations are followed.
- Designed for use where thermal movement of equipment and machinery and other effects of heating/cooling and wetting/drying are anticipated.
- Contains both metallic and quartz aggregates to provide high strengths and increased impact resistance under dynamic and repetitive loading.
- Can be applied in thicknesses from 10mm to 100mm.

### APPLICATION METHOD

#### (a) Surface Preparation

The substrate onto which the grout is to be applied should be mechanically prepared to remove laitance and expose aggregate. The substrate must be sound and free of oil, dust, dirt, paint, curing compounds and other contaminants. Soak area to be grouted with water for a minimum of 3 hours prior to grouting to minimise localised absorption and to assist in the free flow of the grout. Substrates should be damp but free of standing water. Particular attention should

be paid to bolt holes to ensure that these are water-free. Use vacuum and/or oil free compressed air to remove free standing water.

Base plates, bolts, etc. must be clean and free of oil, grease, paint and other contaminants. Set and align equipment. If shims are to be removed after the grout has set, then lightly grease them for easy removal.

#### (b) Formwork

Ensure formwork is secure and watertight to prevent movement and leaking during the placing and curing of the grout. The area should be free of excessive vibration. Shut down adjacent machinery until the grout has hardened.

Formwork should be designed to allow a hydrostatic head of 150mm to be maintained throughout.

On the side where the grout is to be poured, allow 150mm clearance between the sides of the form and the base plate of the machine.

On the opposite side allow at least 50-100mm for the head of the grout and 50mm clearance between the formwork and the edge of the base plate

#### (c) Mixing

For optimum results a high shear paddle or vane mixer should be used. Colloidal impeller mixers are not suitable for use with this product. Air entrainment should be avoided.

For large or continuous placement ensure that adequate mixing capacity and sufficient labour is available. A holding tank fitted with agitation may be required.

Add the correct amount of water for the required consistency to the mixer and then add the complete pack(s) slowly while mixing. Mix for 3-5 minutes depending upon mixer, until a smooth, uniform, lump free consistency is achieved.

The following indicates the appropriate quantity of water required to mix a 25kg bag of MasterFlow 885 grout to various consistencies at the temperature shown.

Water demand (litres per 25kg bag)				
Consistency	Fluid	Flowable	Plastic	Damp Pack
Temp 20°C	4.6	4.2	3.6	3.4

A trial mix may be required to establish the correct water content, which will depend upon mixing equipment and site temperatures.

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### (d) Application Underplate

Ensure sufficient material is available to complete the work and obtain a continuous fill.

Fill all the bolt pockets with grout before pouring the rest of the underplate grout. Pour the grout continuously from one side only to avoid air entrapment. Maintain a constant hydrostatic head of approximately 150mm, to promote flow. DO NOT vibrate. Lengths of metal or plastic strapping laid in the formwork prior to placing can be used to aid complete filling.

### GROUTING LARGE VOLUMES:

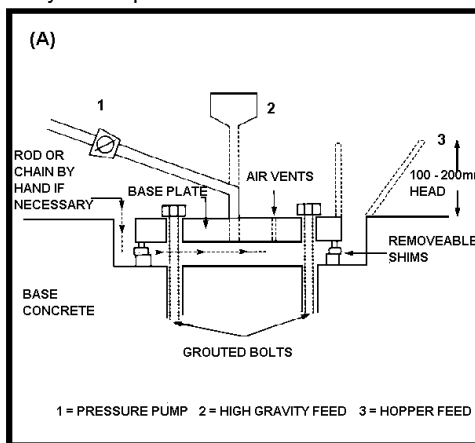
Where the thickness of grout exceeds 100mm the addition of clean, graded 10mm aggregates at up to one to one by weight is recommended. In this instance normal concrete mixers and pumps may be used.

### PUMPING

MasterFlow 885 may be placed using piston, ram or diaphragm type grout pumps fitted with ball valves.

### PLACING TECHNIQUES

Diagram (A) illustrates typical placement of MasterFlow 885 in the flowable state utilising straight pouring or pumping techniques to place a bedding mortar under bearing plates. Note that unrestrained areas around baseplates should always be kept to a minimum.



### UNRESTRAINED AREAS

Even with good curing, unrestrained areas of grout, for example around baseplates, may exhibit drying shrinkage cracking some time after placement. This is not detrimental to the performance of the grout where it is restrained under the plate or bearing, but may affect the cosmetic appearance of the application.

### COVERAGE

Approximate Yield (litres per 25kg bag)				
Consistency	Fluid	Flowable	Plastic	Damp Pack
Temp 20°C	12.9	12.7	12.4	12.3

### FINISHING AND CLEANING

Tools and mixer must be cleaned immediately after use with water. Cured material can only be removed mechanically.

### CURING

Good curing is essential on all exposed surfaces particularly in dry, sunny conditions. Failure to do so will reduce bond, strength and durability. Immediately after finishing apply 1 coat of MasterKure 181SB to all exposed surfaces. Alternative methods are water ponding, mist spraying and the like, but in all cases these must be maintained for at least 7 days. Keep the grout above 5°C at all times during application and cure.

### WORKING TIME

### PACKAGING

MasterFlow 885 is packed in 25kg bags.

### STORAGE

Store in cool dry conditions away from direct sunlight and at ambient temperatures.

### SHELF LIFE

Up to 1 year when stored in unopened containers depending upon storage conditions. Refer also to best before date.

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### HANDLING AND TRANSPORT

Usual preventive measures for the handling of chemical products should be observed when using this product, for example do not eat, smoke or drink while working and wash hands when taking a break or when the job is completed.

Specific safety information referring the handling and transport of this product can be found in the Material Safety Data Sheet. For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

Disposal of product and its container should be carried out according to the local legislation in force. Responsibility for this lies with the final owner of the product.

### CONTACT DETAILS

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Product Data					
Property		Standard	Data	Unit	
Plastic Density		-	Approx. 2,300	kg/m <sup>3</sup>	
Compressive Strength (20 °C)		<b>Fluid (1)</b> N/mm <sup>2</sup>	<b>Flowable (2)</b> N/mm <sup>2</sup>	<b>Plastic (3)</b> N/mm <sup>2</sup>	
	1 day	20	30	49	
	3 days	35	40	64	
	7 days	50	60	71	
	28 days	60	72	82	
(1) 30 Seconds flow by Corps of Engineers Flow Cone method (2) 400mm flow after 1 minute by Colcrete flow trough (3) 90% flow on flow table, ASTM C-230,5 drops in 3 seconds					

**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 controlled on the basis of the desired placing consistency rather than strictly on the water content.

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MasterFlow 885 - BASF plc, Construction Chemicals, Version 1

### Health and Safety

\*For full information on Health and Safety matters regarding this product the relevant Health and Safety Data Sheet should be consulted.

The following general comments apply to all products.

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs, (which may also be tainted with vapour until the product is fully cured and dried). Treat splashes to eyes and skin immediately. If accidentally ingested, seek medical attention. Keep away from children and animals. Reseal containers after use.

### Solvent Based Products

Use in well ventilated areas; avoid inhaling. Suitable respiratory equipment may be needed, eg when spraying. Can cause skin, eye irritation. Wear protective eye shields and gloves during use. Do not smoke or allow sparks or naked lights when stored or in use.

### Resin Products

Can cause irritation, dermatitis or allergic reaction. Use protective equipment particularly for skin and eyes. Use only in well ventilated areas.

### Spillage

Chemical products can cause damage; clean spillage immediately.

### DISCLAIMER

"BASF plc, Construction Chemicals" (the Company) endeavours to ensure that advice and information given in Product Data Sheets, Method Statements and Material Safety Data Sheets (all known as Product Literature) is accurate and correct. However, the Company has no control over the selection of its products for particular applications. It is important that any prospective customer, user or specifier, satisfies him/her-self that the product is suitable for the specific application. In this process, due regard should be taken of the nature and composition of the background/base and the ambient conditions both at the time of laying/applying/installing the material and when the completed work is to be brought into use.

Accordingly, no liability will be accepted by the Company for the selection, by others, of a product, which is inappropriate to a particular application.

Products are sold subject to the Company's standard conditions of sale and all customers, users and specifiers, should ensure that they examine the Company's latest Product Literature.