

# MASTERFLOW<sup>®</sup> 885

Formerly Embeco 885

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

### Description of Product

MASTERFLOW<sup>®</sup> 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 of predictable performance. Use of specially processed manageable metallic aggregate improves impact and dynamic loading resistance compared with normal cementitious grouts.

### Fields of Application

MASTERFLOW<sup>®</sup> 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.

- Railtracks, crane rails.
- Turbines, generators and compressors.
- Rolling, stamping, drawing and finishing mills.
- Paper machine soleplates.
- Anchor bolts and rods.
- Machinery and equipment requiring high strength maximum bearing.

### 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.

### Technical Data/Typical Properties

Visual	Dark Grey, Granular Powder		
<b>Typical compressive strengths @ 20°C</b>			
<b>Consistency</b>			
	Fluid (1)	Flowable (2)	Plastic (3)
	N/mm <sup>2</sup>	N/mm <sup>2</sup>	N/mm <sup>2</sup>
1 day	20	30	49
3 days	35	40	64
7 days	60	50	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.

### Application Procedure

#### Preparation of Substrate

The surface onto which the grout is to be applied should be scabbled to remove laitance and expose aggregate. The surface must be free of oil, dust, dirt, paint, curing compounds, etc. Soak area to be grouted with water for 24 hours prior to grouting to minimise localised absorption and to assist in the free flow of the grout. Surfaces should be damp but free of standing water. Particular attention should be paid to bolt holes to ensure that these are water-free. Use oil free compressed air to blow out bolt holes and pockets as necessary.

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

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.

**Mixing:**

Damp down the inside of the grout mixer with water prior to mixing the initial batch of MASTERFLOW® 885. Ensure the mixer is damp but free of standing water. Add the pre-measured quantity of water. Slowly add the MASTERFLOW® 885 mixing continuously. Mix for at least five minutes until a smooth, uniform, lump free consistency is achieved.

**Placing:**

Lengths of metal strapping laid in the formwork prior to placing may be necessary to assist grout flow over large areas and in compacting and eliminating air pockets. Pour the grout continuously. Maintain a constant hydrostatic head, preferably of at least 15cm

On the side where the grout has been poured, allow 15cm clearance between the side of the form and the base plate of the machine.

On the opposite side allow at least 5-10cm for the head of grout and 5cm clearance between the formwork and the base plate.

MASTERFLOW® 885 grout is suitable for use with most types of pumping equipment.

Immediately after MASTERFLOW® 885 grout is placed, cover all exposed grout with clean wet hessian and keep moist until grout surface is ready to be finished, or until final set and then apply a curing membrane. Alternatively, the use of a curing membrane from the MASTERKURE® range is recommended.

Approximate yield (m <sup>3</sup> per 25Kg bag)				
Consistency	Fluid	Flowable	Plastic	Damp Pack
Temperature 20°C	0.0117	0.0115	0.0110	0.0105

**Water Demand**

Actual water demand will depend on consistency required and the temperatures (both ambient and grout). Do not use too much water as it will cause grout to bleed or segregate.

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
Temperature 20°C	4.6	4.2	3.6	3.4

**UNDER NO CIRCUMSTANCES SHOULD MASTERFLOW® BE RETEMPERED BY THE LATER ADDITION OF WATER.**

When a very rapid set is required in areas subject to chemical spillage or contamination - consult MBT Feb Technical Services Department.

For extreme chemical resistance grout, products are available from the CEILCOTE® range.

For additional information on MASTERFLOW® 885 grout or other non-shrink grouting materials, contact MBT Feb Technical Serviced Department.

**Packaging**

MASTERFLOW® 885 is available in 25 kg units.

**Storage**

Store in cool, dry conditions at ambient temperatures.

**Shelf Life**

12 months if stored according to manufacturer's instructions in sealed containers.

**Watchpoints**

As with other products containing Portland Cement, the cementitious material in MASTERFLOW® 885 grout may cause irritation. Avoid contact with eyes and prolonged irritation. In case of contact with the eyes, immediately flush with plenty of water for at least 15 minutes. Call a physician. In case of contact with skin, wash skin thoroughly.

## MASTERFLOW® 885 Degussa Construction Chemicals UK Version 3

**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.

**Powder Products**

Should be handled to minimise dust formation; use light mask if excessive dust unavoidable. Cement powders when wet or moistened can cause burns to skin and eyes which should be protected during 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:**

This information and all further technical advice is based on our present knowledge and experience. However, it implies no liability or other legal responsibility on our part, including with regard to existing third party intellectual property rights, especially patent rights. In particular, no warranty, whether express or implied, or guarantee of product properties in the legal sense is intended or implied. We reserve the right to make any changes according to technological progress or further developments. The customer is not released from the obligation to conduct careful inspection and testing of incoming goods. Performance of the product described herein should be verified by testing, which should be carried out only by qualified experts in the sole responsibility of a customer. Reference to trade names used by other companies is neither a recommendation, nor does it imply that similar products could not be used.

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