

# MASTERFLOW<sup>®</sup> 400

## High strength, free flowing epoxy grout

### Description

MASTERFLOW<sup>®</sup> 400 is a solvent free epoxy resin grout formulated to withstand static and dynamic loads in a wide variety of applications.

MASTERFLOW<sup>®</sup> 400 is suitable for an application thickness range of 20 - 100mm. The product is three component and easily mixed on site, to a pourable consistency.

### Typical applications

- Crane and transporter rails.
- New and old machine base plates.
- Structural filling of holes and cavities in concrete.
- Industrial equipment and machinery subject to static or dynamic forces.
- Equipment where chemical and acid spillage occurs.

### Advantages

- No priming required.
- Excellent flow characteristics.
- Long pot-life.
- High tensile, flexural and compressive strength.
- Excellent adhesion to steel and concrete.
- Rapid installation and strength gain.
- High resistance to dynamic loads and chemical attack.
- Non-shrink and tolerant of damp surfaces.

### Packaging / yield

MASTERFLOW<sup>®</sup> 400 is supplied in Dark Grey colour and in the following kg size:

Base	3.055kg
Reactor	1.025kg
Aggregate	22.92kg
Total pack weight	27.0kg

Yield: 12.8 litres

### Composition

Bisphenol A epoxy resin base, a low viscosity liquid reactor and a graded aggregate which, when mixed, form an easily pourable and mobile precision grout.

### \*Typical properties

Pot life / Working time:	at 25°C	60 min
	at 40°C	30 min
**Compressive strength @25°C (ASTM C579-91):	7 days	80 N/mm <sup>2</sup>
**Flexural strength @25°C (BS 6319 Part 3 1983):	7 days	27N/mm <sup>2</sup>
**Tensile strength @25°C (BS 6319 Part 7):	7 days	11 N/mm <sup>2</sup>
Density:		2110 kg/m <sup>3</sup>
Co-efficient of thermal expansion (ASTM C531-95):		5.65 x 10 <sup>-5</sup> /°C

\*\* The above properties are highly temperature dependant. Longer pot life and lower strengths to be anticipated at low ambient temperatures.

### Chemical resistance

The resistance of MASTERFLOW<sup>®</sup> 400 to most common corrosive chemicals is excellent:

- Dilute and concentrated alkalis
- Most dilute acids
- Oil and petrol
- Ammonia
- Formaldehyde
- Saline solutions
- Mineral oil, vegetable and animal fats

### Cure time vs. temperature

Cure time of the grout will depend upon the temperature of the base and foundation rather than the ambient air temperature.

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Unless the ambient air temperature has been constant for several days the base / foundation temperature will generally be lower than air temperature. A surface thermometer and field judgement should be used to determine actual cure rates. Cured grout should have solid, almost metallic ring when struck lightly with a hammer, checking as close to the base as possible.

## Application procedure

### Surface preparation:

As with all epoxy resin applications the quality of surface preparation has a direct effect on the performance and durability of the system.

Concrete surfaces should be sound, dimensionally stable, clean, free from laitance, paint, oil, grease, mould release agent and residual curing compound. A rough surface is preferable. Metal surfaces or components to be bedded, should be free from any rust, scaling or paint. Formwork if used should be wrapped in polythene to ensure a clean release.

### Mixing:

**Do not split packs** or alter the ratio of resin components in any way. Mix with a slow speed drill and paddle. Add the contents of the reactor container to the base component in a suitable mixing vessel, ensuring complete transfer of both resin components. Mix for one minute before slowly adding the aggregate and continue mixing until a flowing, pourable lump free consistency is achieved. Mixing for too long can entrain air.

### Placing:

Allow to stand free 5min before pouring, into the prepared area in such a manner that it has the shortest distance to flow. For long pours a suitable head of pressure may be required. Ensure the area to be grouted is **not** completely

sealed, and any displaced air can be expelled. Pour continuously from one side only.

Allow the grout to set prior to removal of formwork (normally after 6 hours). Where placement exceeds depths of 80mm, application should be carried out in layers. The second layer to be applied after 6 hours.

## Equipment care

Clean all equipment promptly with CLEANING SOLVENT NO. 2. Any excess cured material will have to be mechanically removed.

## Storage

Store under cover out of direct sunlight and protect from extremes of temperature. **(In tropical climates the product must be stored in an air-conditioned environment)**. Shelf life is up to one year when stored in unopened containers as above.

Failure to comply with the recommended storage conditions may result in premature deterioration of the product or packaging. For specific storage advice consult BASF's Technical Services Department.

## Safety precautions

As with all chemical products, care should be taken during use and storage to avoid contact with eyes, mouth, skin and foodstuffs (which can also be tainted with vapour until product is fully cured or dried). Treat splashes to skin and eyes immediately. If accidentally ingested, seek medical attention. Reseal containers after use. For specific storage and disposal instructions refer to the Material Safety Data Sheet.



The Chemical Company

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## Note

Field service, where provided, does not constitute supervisory responsibility. For additional information contact your local BASF representative.

BASF reserves the right to have the true cause of any difficulty determined by accepted test methods.

## Quality and care

All products originating from BASF's Dubai, UAE facility are manufactured under a management system independently certified to conform to the requirements of the quality, environmental and occupational health & safety standards ISO 9001, ISO 14001 and OHSAS 18001.

REQUEST AND REFER TO RECOMMENDED  
INSTALLATION PROCEDURES FOR  
**MASTERFLOW<sup>®</sup>** EPOXY GROUTS PRIOR TO USE

03/95 BASF\_CC-UAE revised 01/2010

\* Properties listed are based on laboratory controlled tests.

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**As all BASF technical datasheets are updated on a regular basis it is the user's responsibility to obtain the most recent issue.**

**BASF Construction Chemicals UAE LLC**

P.O. Box 37127, Dubai, UAE

Tel: +971 4 8090800

Fax: +971 4 8851002

www.basf-cc.ae

