MasterFlow 400

High strength, free flowing epoxy grout

MATERIAL DESCRIPTION

MasterFlow 400 is a solvent free epoxy resin grout formulated to withstand static and dynamic loads in a wide variety of applications.

MasterFlow 400 is suitable for an application thickness range of 20 - 80mm. 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 400 is supplied is supplied in 5 litre kits – three components.

COMPOSITION

Bisphenol an 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 at 40°C	30 min 15 min
**Compressive strength @25°C (ASTM C579-91):	7 days	80 N/mm²
**Flexural strength @25°C (BS 6319 Part 3 1983):	7 days	27 N/mm²
**Tensile strength @25°C (BS 6319 Part 7):	7 days	11 N/mm²
Density:		2110 kg/m³
Co-efficient of thermal expansion (ASTM C531-95):		5.65 x 10-5/°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 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. 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.

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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 Methyl Ethyl Ketone. Any excess cured material will have to be mechanically removed.

STORAGE

Store under cover out of direct sunlight and protect from extremes of temperatures. (In tropical climates the product must be stored in an air-conditioned environment). Shelf life is 12 Months 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 Master Builders Solutions' 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.

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NOTE

Technical support, where provided, does not constitute supervisory responsibility. For additional information contact your local MB Construction Chemicals Solutions South Africa (Pty) Ltd representative. MB Construction Chemicals Solutions South Africa (Pty) Ltd shall not be liable for technical advice provided.

MB Construction Chemicals Solutions South Africa (Pty) Ltd reserves the right to have the true cause of any difficulty determined by accepted test methods. Undertaking such tests is not, and shall not be deemed to be, an admission of liability or an assumption of any risk, loss, damage or liability.

QUALITY AND RESPONSIBLE CARE

All products originating from MB Construction Chemicals Solutions South Africa (Pty) Ltd are manufactured under a management system independently certified to conform to the requirements of the quality standards ISO 9001, environmental and occupational health and safety standards.

* Properties listed are based on laboratory controlled tests.

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