

MasterFlow[®] 410

Low Exotherm, High Strength, Flowable Epoxy Resin Grout

DESCRIPTION

MasterFlow 410 is a solvent-free low exotherm, filler extended grout, based on modified epoxy resin and is designed for use as a precision, heavy duty chocking grout for engineering applications and also as a screed material for patch repair. It is supplied as a three component system consisting of epoxy resin, combined with inert fillers and the hardener, to produce a high viscosity flowable liquid grout suitable to fill gaps or voids.

RECOMMENDED USES

- Machinery with high dynamic loads and vibration.
- Backing of steel liners of ore crushing machinery in mines and quarries.
- In corrosive environments where chemicals, oils and solvents make cementitious grouts unsuitable.
- Production line equipment that must resume operations with minimum downtime.
- Machinery base plates, crane rails, anchor bolts, hold down bolts and heavy equipment where tensile strength greater than cementitious systems can provide are required.
- Epoxy screed on floor for patch repair
- Unfillerized epoxy resin & hardener as primer

FEATURES AND BENEFITS

- **Resistance to vibration and impact** – Particularly applicable where cycles of compression/ tension make cementitious grouts unsuitable
- **Minimum shutdown** – Low exotherm allows for thick single pours especially for a shutdown.
- **Excellent chemical resistance** – Maximum protection against attack from mineral acids, oils, fats, fuels, and strong alkali and salt solutions and lubricating and hydraulic oils
- **High bond strength** – Tenacious adhesion to prepared surfaces and requires no priming.
- **Supplied in pre-measured kits** – Eliminates the need for complicated on-site measuring and ensured product performance

PROPERTIES

| Unfillerized Grout (w/o Part C) | |
|---|---|
| Pot life @ 20°C | 90 minutes |
| @ 30°C | 60 minutes |
| @ 40°C | 40 minutes |
| Density (Kg/L) | 1.05 - 1.1 |
| Compressive Strength @ 25°C (ASTM C579) | 40 MPa @ 1 days 60 MPa @ 3 days 80 MPa @ 7 days |
| Flexural strength @ 25°C, (ISO 178) | 40 MPa @ 7 days |
| Tensile Strength @ 25°C, (ASTM C 638) | 11 MPa @ 7 days |
| Application Area | 0.25 – 10mm gap grouting |

| Fillerized Grout (With Part C) | |
|---|--|
| Pot life @ 20°C | 120 minutes |
| @ 30°C | 90 minutes |
| @ 40°C | 50 minutes |
| Compressive Strength @ 25°C (ASTM C579) | 40 MPa @ 1 days 90 MPa @ 3 days 100 MPa @ 7 days |
| Flexural strength @ 25°C (ASTM C 580) | 27.5 MPa @ 7 days |
| Tensile Strength @ 25°C (ASTM C 307) | 11 MPa @ 7 days |
| Bond strength | >2. MPa (concrete failure) |

The performance data is typical and based upon controlled laboratory conditions. Actual performance on the job site may vary from these values based on actual site conditions. If application temperature is less, then the strength development of epoxy grout will be slower.

APPLICATION

For information about application, please obtain a **copy of the Master Builders Solutions “Application Guide for MasterFlow Epoxy Grouts”** from your **local representative**.

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As per depth or thickness of pour, use below recommended table as guide for mixing

| For Thickness of 10 - 80mm | | | |
|--------------------------------|-----------|---------|------------|
| Pack Type | Part A | Part B | Filler F1 |
| Bulk | 1 x 10Kg | 1 x 4Kg | 4 x 14Kg |
| Small | 1 x 2.5Kg | 1 x 1Kg | 1 x 14Kg |
| For Thickness of 60 - 150mm | | | |
| Pack Type | Part A | Part B | Filler F2 |
| Bulk | 1 x 10Kg | 1 x 4Kg | 4 x 17.5Kg |
| Small | 1 x 2.5Kg | 1 x 1Kg | 1 x 17.5Kg |
| For Thickness of 150mm – 300mm | | | |
| Pack Type | Part A | Part B | Filler F3 |
| Bulk | 1 x 10Kg | 1 x 4Kg | 4 x 21Kg |
| Small | 1 x 2.5Kg | 1 x 1Kg | 1 x 21Kg |

PACKAGING

MasterFlow 410 is available as a three component system. While Part A & Part B are common the third component is available in three pack sizes for different application thicknesses. Filler F1 for 10 to 80mm, Filler F2 for 60 to 150mm and Filler F3 for 150 to 300mm thicknesses.

| Component | Small Pack | Bulk Pack |
|-----------------------|------------|-----------|
| MasterFlow 410 Part A | 2.5 Kg | 10 Kg |
| MasterFlow 410 Part B | 1 Kg | 4 Kg |
| MasterFlow 410 Part C | 14 Kg | |
| MasterFlow 410 Part C | 17.5 Kg | |
| MasterFlow 410 Part C | 21 Kg | |

SHELF LIFE

MasterFlow 410 (Part A, B & C) has a shelf life of 12 months each if stored unopened in original containers at moderate temperatures.

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STATEMENT OF RESPONSIBILITY (Disclaimer)

The technical information and application advice given in this Master Builders Solutions 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.

NOTE

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

PACKAGING

| Bulk Packing | A+B+ 4 x Part C | Mixed Density (Kg / L) | Yield (L) |
|-----------------|--------------------|---------------------------|--------------|
| With 14 Kg Pk | 70Kg | 2.0 - 2.1 | 35L |
| With 17.5 Kg Pk | 84Kg | 2.1 - 2.2 | 40L |
| With 21 Kg Pk | 98Kg | 2.2 - 2.3 | 44L |
| Small Packing | A+ B+ Part C | Mixed Density (Kg / L) | Yield (L) |
| With 14 Kg Pk | 17.5 Kg | 2.0 - 2.1 | 8.75L |
| With 17.5 Kg Pk | 21 Kg | 2.1 - 2.2 | 10L |
| With 21 Kg Pk | 24.5 Kg | 2.2 - 2.3 | 11L |

CURING

No damp curing or special curing compounds are required. Cure time will vary depending on quantity mixed and placed and ambient temperature. Initial set at 25°C will be in 4-6 hours. MasterFlow 410 will be fully cured with maximum physical strength and chemical resistance at 7 days at 25°C. Do not install equipment before full cure has been attained or creep may occur.

Note: Curing rates and strength gain are retarded at lower temperatures - curing will not occur below 5°C

PRECAUTIONS

It is highly recommended to use necessary PPE (Gloves, mask etc.,) during installation of the product. In case of Incidents of direct inhalation, causing dizziness/giddiness, loss of consciousness, contact with eyes etc, seek immediate medical advice. The requirements may vary depending on the application areas. Please ensure to have proper ventilation while working in confined areas. Contact Master Builders Solutions representative in case you need further details or refer to the material safety datasheet of the product to know more.