

MasterFlux ER 628 (formerly MasterFlow 628)

Multi-purpose epoxy resin grout

Material Description

MasterFlux ER 628 is a solvent-free multi-purpose high performance epoxy resin based grouting system designed for structural applications in adverse weather conditions. **MasterFlux ER 628** is supplied as a two component system, with a high flow capability.

Areas of Application

- Areas requiring a moisture insensitive bond to the concrete substrate.
- Bolt, rebar structural anchoring, hold down bolts.
- Baseplates and machinery grouting.
- Crane rails and tight clearances.
- Exterior grouting and repair applications.

Characteristics and Benefits

- High early and ultimate strength –able to transfer load quickly.
- High bond strength to correctly prepared concrete and to steel – resists vibration and highly repetitive loading.
- No on site measuring – supplied in pre-measured volumes ensuring product success
- Pumpable – fast application for complex and large baseplates.
- Displaces water - suitable for shallow depth underwater grouting.
- Suitable for chemical exposure situations -excellent chemical resistance to oils, mineral acids, fuels and alkali solutions.

Properties

Part A	Part B	Mixed
White Viscous Paste	Black Thin Liquid	Off White Viscous Liquid
Viscosity		7Pa.s
Density		1.7kg/L
Temperature during application (internal locations)		5°C - 35°C
Pot Life (at 23°C)		30mins
Compressive strength (50mm cubes)		
12 hours		10 MPa
24 hours		32 MPa
7 days		98 MPa
Tensile strength		55 MPa
Bond strength to concrete		concrete fails
Bond strength to steel		14MPa

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.

Chemical Resistance

MasterFlux ER 628 resists most hydraulic and lubricating oils, common organic solvents and alkalis including strong caustic solutions. Chemical resistance depends on the chemicals involved, their concentration, temperature and degree of exposure.

Good housekeeping practices such as immediate cleanup of all spillage will greatly extend the working life of the product.

Pot Life

Pot life will vary depending on quantity mixed and placed and temperature. The larger the volume and the higher the temperature, the shorter will be the pot life.

As a guide, the pot life of a 10kg kit mixed at 23°C would be approximately 30 minutes.

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Application

Surface Preparation

Concrete should be well cured, at least 28 days old and have a minimum compressive strength of 25MPa. Clean surface thoroughly to remove all contaminants such as dirt, oil, grease, wax, rust and coatings. Remove laitance and roughen surface to ensure good bonding by chipping, scabbling or grit blasting to achieve a CSP 4– best to allow to dry thoroughly (no standing water), however, **MasterFlux ER 628** may be applied to a damp substrate. If an anchor bolt sleeve is to be filled, be sure all water is removed. If the anchor bolt is to be left ungrouted, seal the bolthole with felt, foam rubber or other means.

Formwork must be strong and leak proof, and should be placed within 20-25mm of base plate edge. Coat formwork with heavy grease or cover with polythene film to allow easy removal of forms. Formwork may be sealed with putty or caulking. Seal wood forms to vertical concrete surfaces by applying putty or caulk below top of concrete, then press form into place.

Moderately sized equipment should utilise a head form sloped at 45° to enhance the grout and minimize forming costs. Note: 125-150mm clearance is recommended at the area where the grout is to placed.

Forms should extend a minimum of 20mm higher than the bottom of the equipment being grouted. Protect the foundation and equipment from rain or moisture.

Mixing

MasterFlux ER 628 is formulated with a mix ratio of 5:1 by volume, Part A resin to Part B hardener.

Transfer contents of Part B to Part A container. Mix for 5 minutes using a slow speed electric drill with a flat paddle. Avoid entrapping air. Use without delay.

Placing

Application Thickness - Suitable minimum and maximum thickness depends on a number of factors including clearance, distance to be flowed and ambient, surface and product temperatures. A header form is generally required for long flows. 50mm maximum thickness per pour down to 5mm by

gravity. Pump pressure can fill gaps as small as 1.5mm. Clearances must be such that grout will flow without forming air pockets -provide vent holes. Grouting operations must be continuous with a minimum head of 15mm. For intricate voids gentle strapping may be required to assist flow – do not vibrate grout.

For flat bottom plates and bases, the grout should be poured from one side through to the other across the short dimension. When grouting closed areas, start at one end of the form and fill the cavity completely as you advance toward the other end to prevent air entrapment.

Note: low foundation and ambient temperatures decrease flowability. Check frequently for leaks.

Leaks do not self-seal. If not stopped they will cause voids.

Anchor bolts, dowels, starter bars: pump or use tremmies for bolts in situ. For bolts placed into preformed holes, pre-fill the hole with grout then slowly work the bolt into the grout.

For information about application, please obtain a copy of the "Application Guide for MasterFlux Epoxy Grouts" from your local Master Builders Solutions Technical Sales Representative or our website.

MasterFlux ER 628 will be fully cured with maximum physical strength and chemical resistance in 7 days at 23°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.

Estimating Data

MasterFlux ER 628 yields approximately 5.9 litres when mixed.

MasterFlux ER 628				
L	Thickness in mm /m ²	m ³	kits /m ³	m ² /mm thickness
5.9	5.9mm	(0.0059)	169	5.9 m ²

Packaging

Two-component system available in a 10 kg kit comprising:

Part A Resin 9 kg

Part B Hardener 1 kg

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Storage & Shelf Life

MasterFlux ER 628 has a shelf life of 24 months. Store out of direct sunlight, clear of the ground on pallets protected from rainfall.

Precautions

For the full health and safety hazard information and how to safely handle and use this product, make sure that you obtain a copy of the Safety Data Sheet (SDS) from our office or website

Disclaimer

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STATEMENT OF RESPONSIBILITY

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MB Solutions Australia Pty Ltd

ABN 69 634 934 419
Suite 102, 2 Burbank Place
Norwest NSW 2153

Freecall: 1300 227 300

www.master-builders-solutions.com/en-au

MB Solutions New Zealand Ltd

45C William Pickering Drive
Albany, Auckland
New Zealand

Phone: +64 9 414 7233

Emergency Advice:

1300 954 583 within Australia (24hr)
0800 001 607 within New Zealand