Megapoxy

Deep Pour Grout

Heavy Duty Deep Pour Epoxy Grout

Technical Data Sheet

DESCRIPTION

Megapoxy Deep Pour Grout is a two component, 100% solids, resin based, solvent-free, flowable epoxy grout, designed specifically for use in civil engineering applications, where development of high compressive and impact strength is required. Suitable for deep void grouting where a single pour application is required.

RECOMMENDED APPLICATIONS

- Grouting Machinery
- Rail Track Pads
- Rail Grouting
- Core Hole Filling
- Locking PT Cables
- High Load Vibration Grouting
- Chocking Machienry
- Bridge Bearing Pads
- Baseplate Grouting
- Filling Truncation Pockets

PROPERTIES

Mixing Ratio by Volume	5 Part A to 1 Part B
Work Time at 25°C:	60 minutes
Minimum Cure Time at 15°C	48 hours
Minimum Cure Time at 25°C	24 hours
Minimum Cure Time at 35°C	12 hours
Minimum Application Temperature	10°C
Mixed Viscosity at 25°C	60000cps
Mixed S.G. at 25°C	1.71
Colour Part A	Grey
Colour Part B	Amber
Appearance Mixed	Grey

CURED PROPERTIES

Ultimate Compressive Strength - ASTM C579	125MPa
Yield Compressive Strength - ASTM C579	80MPa
Bond Strength Concrete - ASTM D4541	>3MPa
Tensile Bond Strength Steel - ASTM D897	19MPa
Modulus of Elasticity - ASTM C579	3.3GPa
Flexural Strength - ASTM D790	72MPa
Tensile Strength ASTM D638	38MPa
Tensile Lap Shear Strength - ASTM D1002	9MPa (steel to steel)
Hardness - Shore D - ASTM D2240-00	88
Dielectric Strength (kV/mm)	52.7
Surface Resistivity (Ohm) - ASTM D257	10^{12}
Volume Resistivity (Ohm.cm)	$1.25x10^{11}$
Peak Exotherm Temp - ASTM D2471	40.5°C (415ml)

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CHARACTERISTICS

- Low VOC
- 2 Part Pre-Metered Kits
- Mixes Easily Mechanically
- Low Exotherm
- Flowable, can be poured under 20mm plates
- High strength permanent bonds
- Excellent tensile and compressive strengths, superior to concrete
- Excellent chemical resistance
- Good strength retention after prolonged immersion in water

LAYER THICKNESS

Minimum Grout Depth:	50mm
Maximum Grout Depth:	300mm*

*To discuss your application and project requirements, please contact the Technical Department for further information and required pour thickness.

STRENGTH DEVELOPMENT

Day 1:	57MPA
Day 2:	80MPa
Day 7:	86MPa

*ASTM C579-23

SURFACE PREPARATION

Concrete

Concrete should be free from grease and oil. If necessary, clean with industrial heavy duty degreaser. When clean, remove surface laitance. This is best done by mechanical abrasion such as scabbling, grit blasting or grinding. If this is not possible acid etching must be carried out. Mix concentrated hydrochloric acid with equal volume of water and spread at the rate of 0.5 litre per square meter of concrete surface. Allow to react for about 10 minutes and wash the area thoroughly and scrub with a stiff bristled broom to remove loose sand. Allow to dry for 24 hours. For maximum adhesion the concrete should be surface dry.

Metal Surfaces

Metals should be grit blasted to AS 1627.2.2002. If this is not possible, mechanically abrade the surface to a clean, bright metal surface. Once this abrasion is complete, degrease the surface by flooding with an industrial grade degreaser. Wire brushing is not entirely satisfactory and gives minimal adhesion only.

Coated Surfaces

It is recommend to remove all coatings prior to bonding, bonding to coated surfaces will give inferior bond strengths compared to bonding directly to a prepared substrate.

Concrete:

The surface may be either flame-cleaned, or mechanically treated with a scutching tool, to remove all traces of paint. Complete the preparation by diamond grinding or scabbling.

Metals:

Steps should be taken to remove all paint and/or galvanizing. Good quality paint stripper should be used, followed by grit blasting or grinding to a bright metal finish.

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MIXING PROCEDURE	Add the entire contents of Part B into the Part A pail, there is enough space to combine both parts in the Part A container. Mix the two parts together thoroughly for 3 minutes, using a mechanical stirrer on a low speed of 200rpm - 400rpm, making sure to scrape the base and corners of the pail. Do not move the mixer up and down. Once 3 minutes is up, scrape the sides of the pail with a straight edge to remove unmixed Part A from the sides of the pail. Do not use the mixer head to scrape the sides. Mix for another 2 minutes, if there is a ring of Part B around the edge of the pail, lift the mixer slightly and lean the mixer back approximately 30°, this will change the resin flow and should pull the Part B into the mix. Ensure the mixture is thoroughly mixed, this is essential, as incomplete mixing will result in poor physical properties. Megapoxy Deep Pour Grout must be applied immediately after mixing. If ambient temperature is high, Megapoxy Deep Pour Grout should be stored in a cool place until used. High ambient temperatures will lead to shortened usable life. Topping up can be carried out at a later date when convenient. If you do not require adhesion of the Megapoxy Deep Pour Grout, form work surfaces should be coated with Megapoxy Wax or silicone based release agent.
IMPORTANT INFORMATION	It is essential that the correct mixing ratio be used and that the Part A and Part B are thoroughly mixed together before use. Inaccuracies and poor mixing will result in lower physical properties of the cured system and, if the error is sufficiently large, the system may not cure satisfactorily and discolour on ageing.
CLEANING	To keep mixing implements and working tools clean, use Megapoxy Thinners. Use disposable rubber gloves to protect hands and maintain proper industrial hygiene. For further details refer to the Megapoxy Deep Pour Grout Safety Data Sheet.
PACKAGING	Megapoxy Deep Pour Grout is available in 23kg kits. (approx. 14lts)
TECHNICAL SERVICE	All purchasers of Megapoxy Products, are encouraged to avail themselves of our Technical Service for our Megapoxy Products. The information in this Bulletin is correct at time of publication, however continual research and development is being carried out and specs may change without notice.