Megapoxy

Megadure Ceramic

Alumina Bead Wear Resistant Lining

Technical Data Sheet

DESCRIPTION

Megadure Ceramic is a HIGH ALUMINA BEAD two component gap filling epoxy paste, wear resistant lining. Megadure Ceramic is designed for protection of equipment in mines, ball mills, coal fired plants, dredging operations, abrasive slurry pumps, bulk handling and processing equipment where extreme abrasion resistance is required. Megadure Ceramic is also suitable for grouting between wear resistant high alumina ceramic tiles, pipe fittings and lining steel surfaces.

Megadure Ceramic is a blue-green in colour when fully cured and can be applied by trowel or spatula and cures under ambient conditions within 8 Hours.

Megadure Standard is AS/NZS 4020: 2018 Potable Water Certified.

Megadure Ceramic is proudly Australian manufactured.

RECOMMENDED APPLICATIONS

- Chute Lining
- Wear Coating
- Pipe Lining
- Ceramic Tile Grouting

PROPERTIES

	Megadure (std)	Megadure Quick Set (rapid)
Mixing Ratio by Weight	100 Part A to 3.5 Part B	100 Part A to 11 Part B
Work Time at 25°C:	30 minutes	10 minutes
Work Time at 15°C	60 minutes	20 minutes
Initial Cure at 25°C	6 hours	2 hours
Initial Cure at 15°C	12 hours	4 hours
Cure Time at 25°C	24 hours	12 hours
Cure Time at 15°C	48 hours	24 hours
Minimum Application Temperature	10°C	10°C
Coverage - 2 kg kit	0.5mm^2 x 2mm thick	0.5mm^2 x 2mm thick
Colour Part A	White	White
Colour Part B	Blue	Blue

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CURED PROPERTIES

	Standard	Quick Set
Ultimate Compressive Strength - ASTM 579	80MPa	60MPa
Bond Strength Concrete - ASTM D7234	>3MPa (concrete failure)	>3MPa (concrete failure)
Tensile Bond Strength Steel - ASTM D897	14MPa	13MPa
Modulus of Elasticity - ASTM C579	3MPa	2MPa
Flexural Strength - ASTM D790	55MPa	50MPa
Tensile Strength - ASTM D638	29MPa	29MPa
Tensile Lap Shear Strength - ASTM D1002-00	3.78MPa steel to steel	6.6MPa steel to steel
VOC (g/l) - ASTM D3960	4 very low	
Water Vapour Transmission - ASTM E96/E96M	0.000 (gram/hr m^2)	
Water Absorption - ASTM D570	0.417 Increase in weight (%)	

CHARACTERISTICS

- Low VOC
- Pre-metered easy to use kit
- Easily mixed manually or mechanically
- Great Coverage
- Non-Sag Paste
- High Bond Strength
- Excellent tensile and compressive strengths
- Excellent chemical resistance

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.

Megadure Ceramic 2kg kit

Mix the two parts together thoroughly for a minimum of 2 minutes, manually or using a mechanical stirrer on a low speed of 200rpm or lower, making sure to scrape the base and corners of the pail, after 2 minutes, scrape the side of the drum and mix for a further 1 minutes.

Set a timer do not guess the time.

Megadure Ceramic Quick Set 2kg kit

Mix the two parts together thoroughly for a minimum of 2 minutes, by hand or using a mechanical stirrer on a low speed of 200rpm or lower, making sure to scrape the base and corners of the drum, after 2 minutes, scrape the side of the drum and mix for a further 1 minute.

Set a timer do not guess the time.

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.

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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 water at a ratio of 1lt acid to 8lt 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.
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 Megadure Ceramic and Megadure Ceramic Quick Set Safety Data Sheet.
PACKAGING	Megadure Ceramic and Megadure Ceramic Quick Set is available in 2kg kits. Product should be stored in cool dry store.
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.