

# MAKCOTE EPOXY BINDER

## TECHNICAL DATA SHEET

### Muti Purpose Two-Component, 100% Epoxy Binder

**Makcote Epoxy Binder** is a two-component, low viscosity, epoxy resin system to which **Makrete Fillers M4/M6** can be added to produce epoxy mortars having a variety of consistencies.

**Makcote Epoxy Binder** also forms part of the **Makrete Epoxy Primer** system.

### RECOMMENDED USES

- Combining with selected fillers and aggregates to produce epoxy mortars of various consistencies.
- Used with selected filler additions to produce bolt or vertical starter-bar grouts
- Can be used as a priming system with some **Makrete Patch Repair** products
- Can be mixed with fine aggregates such as Makrete M4/M6 Fillers to produce mortar of different consistencies for fast and permanent patch repair of concrete floors, particularly where high strength, abrasion and chemical resistance is required.
- Epoxy primer
- Structural repairs
- Crack repairs
- Can be used on damp surfaces

### FEATURES AND BENEFITS

- Early development of initial hardness, minimizes maintenance disruption
- Unaffected by a wide range of acids, alkalis and industrial chemicals

- Up to 90MPa compressive strength – depending on mix consistency
- Versatile mixing consistencies for a wide range of applications
- Chemical resistant
- 100% Epoxy
- Solvent free
- Bonds to damp concrete
- High mechanical and tensile strength
- Internal/external applications
- Australian Made and Australian Owned

### APPLICATION INSTRUCTIONS

#### PREPARATION

All grease, oil, chemical contamination, dust, laitance and loose concrete must be removed by scabbling or light bush hammering to provide a sound substrate. Steel surfaces should be grit blasted to white metal. Surfaces which show any traces of oil must be degreased with a chemical degreaser prior to grit blasting.

#### PRIMING

When using as a general primer for roll / spray coats apply at a rate of 6m<sup>2</sup>/ltr. If the substrate is very porous a second coat may be required in patches or in full.

Allow the primer to cure and apply the coating system within 24 hrs. Any longer will require a surface sand and solvent wipe prior to coatings application. Priming for dry mortar mixes used for coving, ramps, patches require a tack coat prime prior to applying the mortar.

Allow **Makcote Epoxy Binder** to tack off but remain tacky while applying the mortar otherwise the mortar will slide over the surface.

Dry mortars may require an additional seal coat after curing, prior to the application of the finished coating system, to avoid a patchy look. For priming very porous concrete, apply two coats of the **Makcote Epoxy Binder**.

## MIXING

### AS A PRIMER:

The entire contents of the **Makcote Epoxy Binder** kit should be stirred and added to the base container and mixed thoroughly for 3 minutes using a heavy-duty drill and spiral mixer, taking particular care to scrape the sides and bottom of the container.

### IMPORTANT:

Once mixed the product should be poured into flat, open paint trays to maximise pot life working time. Holding the product in the original mixing can will lead to an exothermic reaction which will significantly reduce the pot life.

### AS A MORTAR:

Mix the required amount of **Makcote Epoxy Binder** as per the Coverage section. To this mix add the required amount of **Makrete Fillers M4/M6s** to achieve the consistency required.

A forced-action mixer is essential. Mixing at a slow speed (400/500 rpm) in a suitably sized drum such as helical mixing paddle filled to 1600w mixer or similar.

In cold weather, materials should be stored between 15°C - 20°C for 24 hours before use.

## MIXING PART PACKS:

It is recommended that full packs be mixed, however for applications where smaller quantities of product are required, experienced applicators may elect to mix part packs using the mix ratio shown in the Properties section of this document. In doing so the contractor accepts the risk of any off-ratio mixing. Reliable scales should be used to weigh out individual components.

## PACKAGING

**Makcote Epoxy Binder** is supplied in 6 Litre or 30 Litre kits.

## SHELF LIFE

**Makcote Epoxy Binder** has a shelf life of 5 years if kept in a cool, dry conditions in the original unopened packs. If stored at high temperatures and/or high humidity conditions the shelf life may be reduced.

## CLEAN UP

**Makcote Epoxy Binder** should be removed from tools and equipment with a suitable solvent.

## HEALTH AND SAFETY INFORMATION

Please refer to full Safety Data Sheet for this product, which is available from **Makrete Building Solutions**.

Read the TDS/SDS carefully prior to use as application or performance data may change from time to time. In emergency, contact any Poisons Information Centre (phone 13 11 26 within Australia) or a doctor for advice.

## TECHNICAL SPECIFICATIONS - PERFORMANCE CHARACTERISTICS

PERFORMANCE CHARACTERISTICS	
Pot life:	30 minutes
	The pot life quoted refers to the binder system without addition of fillers. This value will increase as filler is added to mixed product or if the mixed product is applied in thin layers.
Mix ratio (by volume):	2:1 Base: Hardener
Mix ratio (by weight):	100:45 Base: Hardener
Initial hardness:	24 hours
Full cure:	7 days; below 20°C the curing time will be increased
Minimum application temperature:	5°C
Maximum service temperature:	80°C
Specific gravity (mixed):	1.1
Viscosity (mixed):	approx. 500cps
Tensile strength	48MPa (unfilled)
Compressive Strength 7 days 20C	105 MPa (unfilled)
VOC content:	12g / litre
CHEMICAL RESISTANCE:	
Citric Acid 10%	Excellent
Tartaric Acid 10%	Excellent
Acetic Acid 5%	Satisfactory
Nitric Acid 25%	Good
Hydrochloric Acid 25%	Excellent
Sulphuric Acid 50%	Very Good
Sodium Hydroxide 50%	Excellent
Diesel Fuel/Petrol	Very Good
Sugar Solutions	Very Good
Lactic Acid	Very Good
Hydrocarbons	Very Good
Phosphoric Acid 50%	Very Good

### EXOTHERM

All epoxy systems will develop a temperature rise on mixing. Its extent will be a function of the volume to surface ratio, the ambient temperature, as well as the mass and thermal conductivity of the surrounding materials.

When using as a primer (unfilled), once mixed, apply **Makcote Epoxy Binder** immediately - do not hold in bulk or re-lid the container of mixed product. Do not mix more product than can be used well within the 30 minutes pot life stated in the Performance Characteristics Table. above.

## YIELDS

Litres of mixed Makcote Epoxy Binder	Approx Pot Life @ 22°C minutes	Kg of Makrete Fillers M4/M6	Yield Litres	Consistency	7 Day Compressive Strength	7 Day Tensile Strength
1	50-60	3.0	3.2	Fluid Pourable	100 MPa	35 MPa
1	60-70	4.5	4.8	Stiff Paste	90 MPa	30 MPa
1	65-70	6.0	6.4	Trowellable	80 MPa	20 MPa
1	70-90	7.5	8.0	Dry Mortar	70 MPa	15 MPa

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Product	MAKCOTE EPOXY BINDER
Issue Date	JUN 2023
Issue No:	1
Item Code	MAKC50
Size	6 Litre Kit
Item Code	MAKC51
Size	30 Litre Kit

### Product disclaimer

This Technical Data Sheet (TDS) summarises our best knowledge of the product, including how to use and apply the product based on the information available at the time.

The TDS should be carefully read and consider the information in the context of how the product will be used, including in conjunction with any other product and the type of surfaces to, and the manner in which, the product will be applied.

Our responsibility for products sold is subject to our standard terms and conditions of sale. Makrete does not accept any liability either directly or indirectly for any losses suffered in connection with the use or application of the product whether or not in accordance with any advice, specification, recommendation or information given by it.

The information and any recommendations relating to the application and end-use of all MAKRETE products are provided in good faith based on MAKRETE's knowledge and experience of the products. In applications, the differences in materials, and variances of substrates and actual site conditions can vary such that no warranty in respect of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be taken as inferred either from this information, or from any written recommendations, or from any other advice offered by MAKRETE. The proprietary rights of third parties must be observed. All orders are accepted subject to our sale terms and conditions.

It is recommended that all products be properly stored, handled and applied in accordance with the printed literature (TDS).

PLEASE CONSULT OUR TECHNICAL DEPARTMENT FOR FURTHER INFORMATION.