

### M-METAL 400 – METAL EPOXY LIQUID – RAPID CURE

#### M-METAL 400 - Metal Epoxy Liquid - Rapid Cure

Is Rapid Curing Metal Liquid Epoxy for emergency repairs to metal components.

When mixed products are tolerant to poor surface conditions and can be applied directly to damp and oil contaminated steel provided all loose materials are removed before application.

The material is supplied in two parts with a base and activator, once mixed M-METAL 400 – Metal Epoxy Liquid – Rapid Cure provides a smooth pour-able fluid ideally suited for filling pitting or as a structural adhesive on steel and other surfaces.

Once mixed the material can be applied up to a thickness of 3.0mm without slumping. Aluminium oxide aggregates may be added to create anti-slip surfaces.

#### Typical Uses

- Filling Pitting Corrosion on Storage Tanks
- Anti-slip system for Steel Decks & Step Nosing's
- Resurfacing Head Rollers on Conveyor Systems
- Filling Voids and Cavities
- Sealing Transformer Leaks
- Structural Adhesive

#### Application Guide

##### Surface Preparation - Grit-Blast

- All oil and grease must be removed from the surface using an appropriate cleaner such MEK or similar type solvent.
- All surfaces must be abrasive blasted to **ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2)** minimum blast profile of 75 microns using an angular.
- Once blast cleaned, the surface must be degreased and cleaned using MEK or similar type solvent.
- All surfaces must be coated before gingering or oxidation.

##### Surface Preparation - Manual

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- **Mechanical tools** use a handheld mechanical grinder with a coarse grinding pad or rotary wire brush. Ensure all loose material and as much surface contamination is cleaned from the surface.
- **Hand tools** use a wire brush or coarse sand paper to abrade the surface. Ensure all loose material and as much surface contamination is cleaned from the surface.

Ensure the surface is wiped with an appropriate solvent cleaner such as MEK prior to and after abrading the surface.

- **Leaking transformer surfaces** to repair a weeping/ leaking transformer surface, mixed fluid must be applied within 10-15 seconds of the surface being cleaned.

### **DO NOT ABRAD THE SURFACE WITH ANY MECHANICAL TOOLS.**

If possible, use a wire brush to take off any loose corrosion or coating, then wipe the surface with a solvent wipe and take away as much excess oil as possible.

### **Environmental Checks**

Prior to mixing please ensure the following:

- The base component is at a temperature between 15-25°C.
- Do not apply the material when the ambient or substrate temperature is below 5°C or less than 3°C above dew point.

### **Mixing**

- Mix both Part-A and part-B together in full units as supplied. For small quantities use a mixing ratio of 1:1 for both volume and weight.
- When mixing both materials, it is very important to have a uniform grey fluid that is streak free. Once mixing is complete, use the mixed paste as soon possible after mixing.

Use all mixed material within 5 minutes at 20°C.

### **Product Application**

#### **Equipment Repairs**

- Using a brush or applicator tool, apply the material to the prepared surface, ensuring the product is pressed into any scars or cracks and profile the repair to a smooth finish.
- If required, the product can be used in conjunction with reinforcement tape and used to wrap round leaking pipe work.

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- Use the applicator tool provided to scrape the mixed material off the mixing board, apply M-METAL 400 onto the surface, press the material onto the weeping/ leaking surface. Apply the material to a target thickness of 3mm.

Do not overwork the material. Once the repair is complete allow to cure for 20-30 mins.

### Technical Information

Appearance	Base Activator Mixed	Black fluid White fluid Mid grey fluid
Mixing Ratio	By Weight By Volume	1:1 1:1
Density	Base Activator Mixed	1.8 1.8 1.8
Volume Capacity		555cc/kg
Solids Content		100%
Slump Resistance	Nil at	3mm
Usable Life	10°C 20°C 30°C	10 minutes 5 minutes 2.5 minutes
Coverage	1kg at a thickness of 1.0mm	0.5m <sup>2</sup>
Cure Times @ 20°C	Movement without load or immersion: Machining and light loading: Full loading: Immersion:	45 mins 2.0 hours 8.0 hours 8.0 hours
Storage Life	Unopened and stored in dry conditions (15-30°C)	1 year
Adhesion	Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75-micron profile	185kg/cm <sup>2</sup> 2630psi

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Compressive Strength	Tested to ASTM D 695	185kg/ cm <sup>2</sup> 2630psi
Corrosion Resistance	Tested to ASTM B117	Minimum 5000 hours
Lap Shear	Tested to ISO 4587	240kg/cm <sup>2</sup> 3400psi
Hardness	Rockwell R to ASTM D785	85
Heat Distortion	Tested to ASTM D648 at 264psi fibre stress.	20°C Cure 60°C
Heat Resistance	Suitable for long-term water immersion at temperatures up to: Resistant to dry heat more than:	60°C 130°C Dependant on load
Chemical Resistance	The product resists attack by a wide variety of inorganic acids, alkalis, salts, and organic media.	

### Legal Notice

The data contained within this Technical Data Sheet is furnished for information only and is believed to be reliable at the time of issue. We cannot assume responsibility for results obtained by others over whose methods we have no control.

It is the responsibility of the customer to determine the products suitability for use.

Maxkote accepts no liability arising out of the use of this information or the product described herein.

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