MAXKOTE

APPLICATION GUIDE

APG-REV2- 2022

M-METAL 600 – METAL EPOXY PUTTY – RAPID CURE

M-METAL 600 - Metal Epoxy Putty - Rapid Cure

Is solvent free, epoxy repair and rebuilding compound, suitable for emergency repairs to metal or plastic components suffering material loss due to mechanical damage, erosion, corrosion, or chemical attack.

M-METAL 600 – Metal Epoxy Putty – Rapid Cure when mixed the material is tolerant to poor surface conditions and can be applied directly to damp or wet surfaces, providing all loose material is removed before application.

The material is supplied in two parts with a base and activator, once mixed, provides a smooth grey paste. The mixed the material can be applied in a single coat up to a thickness of 20.0mm without slumping, allowing for faster repair times and return to service.

Typical Uses

- Filling Pitting Corrosion
- Repair Leaking Seams on Storage Tanks
- Rebuild Worn Pump Impellers and Casings
- Repairs to Leaking Flange Faces
- Rebuild damaged Shafts and Bearing Housings
- Resurfacing Underwater Structures
- Repair Cracks in Engine Blocks
- As a 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

- **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 emery cloth 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.

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 us a mixing ratio of **1:1 by volume or 1:1 by weight**
- When mixing both materials, it is particularly important to have a uniform grey paste 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

- Using a spatula or applicator tool, apply the material to the prepared repair area.
- Ensure the product is pressed into any holes, scars, or cracks.
- Once the repair has been completed smooth off any imperfections using a gloved hand with a little water.

Over-coat Times

- Minimum – the applied material can be over-coated as soon as it is touch dry.
- Maximum – the over-coating time should not exceed 4 hours.

Where the maximum over-coating time is exceeded, the material should be allowed to harden before being abraded or flash blasted to remove surface contamination.

Technical Information

Appearance	Base	Mid grey paste
	Activator	
	Mixed	White paste

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		Mid grey paste
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	20mm
Usable Life	10°C 20°C 30°C	10 minutes 5 minutes 2.5 minutes
Coverage	1kg at a thickness of 1.0mm	0.55m2
Cure Times @ 20°C	Movement without load or immersion: Machining and light loading: Full loading: Immersion:	45 mins 0.90mins 4.0 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/cm² 2630psi
Compressive Strength	Tested to ASTM D 695	185kg/ cm² 2630psi
Corrosion Resistance	Tested to ASTM B117	Minimum 5000 hours

Lap Shear	Tested to ISO 4587	240kg/cm² 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 60°C. Resistant to dry heat more than 130°C dependant on load.	60°C 130°C
Chemical Resistance	The product resists attack by a wide variety of inorganic acids, alkalis, salts, and organic media.	

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A: Tower Court, YO30 4XL

T: 01904 809 773

E: info@maxkote.co.uk

W: www.maxkote.co.uk