MAXKOTE

APPLICATION GUIDE

APG-REV2- 2022

M-CERAMIC 100 – EPOXY CERAMIC PUTTY

M-CERAMIC 100 - Epoxy Ceramic Putty

Is formulated using the latest solvent free epoxy technology, enhanced further with the addition of high-quality silicon carbide ceramic fillers.

Designed principally for rebuilding worn pump components suffering material loss due to erosion, corrosion, and cavitation.

M-CERAMIC 100 – Epoxy Ceramic Putty provides long-term protection for Fluid-Flow Equipment. The product can also be utilised in Pneumatic and Conveyor Systems.

Typical Uses

- Rebuild Pump Impellers, Casings & Cutwaters
- Repair Ship Rudders, Bow thrusters & Kort Nozzles
- Repair Heat Exchanger Tube Sheets
- Fan Casings and Fan Blades
- Internal Pipe Protection
- Rebuild Conveyor Screws

Application Guide

Surface Preparation - Grit-Blast

All oil and grease must be removed from the surface using an appropriate cleaner such as 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.

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Surface Preparation - Manual

All oil and grease must be removed from the surface using an appropriate cleaner such as MEK.

Surfaces must be mechanically abraded using handheld grinders to ISO 8501/4 ST3 (SSPC SP3 ST3).

Once abraded, the surface must be degreased and cleaned using MEK or similar type material.

All surfaces must be repaired before gingering or oxidation occurs.

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 3:1 by volume or 5:1 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.

Use all mixed material within 20-25 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.

Technical Information

Appearance Base

Activator

Mixed Dark grey paste

Light grey paste

Mid grey paste

Mixing Ratio by Weight

By Volume 5:1

3:1

Density Base

Activator

Mixed 2.70

1.70

2.46

Volume Capacity 406cc/kg

Solids Content 100%

Slump Resistance Nil at 20mm

Usable Life 10°C

20°C

30°C

50-60 minutes

25-30 minutes

15-20 minutes

Coverage 1kg at a thickness of 1.0mm 0.406m2

Cure Times @ 20°C Minimum Overcoat time

Maximum overcoat time

Full Cure 2 hours

6 hours

3 days

Storage Life Unopened and stored in dry conditions (15-30°C) 5 years

Abrasion Resistance Taber CS17 Wheels/1 Kg load 20mm³ loss/1000 cycles

Adhesion Tensile Shear Tensile Shear to ASTM D1002 on abrasive blasted mild steel with 75-micron profile

206kg/cm² 2920psi

Pull off Adhesion ASTM D4541 on abrasive blasted mild steel with 75-micron profile
244 kg/ cm² (3480 psi)

Compressive Strength Tested to ASTM D 695 1075kg/ cm² 15,300psi

Corrosion Resistance Tested to ASTM B117 Minimum 5000 hours

Flexural Strength Tested to ASTM D790 703kg/cm² 10,000psi

Hardness Rockwell R to ASTM D785 100

Heat Distortion Tested to ASTM D648 at 264psi fibre stress 20°C Cure 57°C

100°C Cure 98°C

Heat Resistance Suitable for long-term immersion at temperatures up to

Intermittent contact with pressurised steam up to

Resistant to dry heat more than

60°C

120°C

200°C dependant on load.

Chemical Resistance The product resists attack by a wide variety of

inorganic acids, alkalis, salts, and organic media

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