MAXKOTE

APPLICATION GUIDE

APG-REV2- 2022

M-CERAMIC 403 – EPOXY CERAMIC WEAR COMPOUND – HIGH ABRASION & HIGH TEMPERATURE

M-CERAMIC 403 – Epoxy Ceramic Wear Compound – High Abrasion & High Temperature

Is a two-component solvent free Epoxy Novolac Ceramic Wear Compound containing graded 1.5mm ceramic beads for extreme wear environments from fine particles & wet slurries.

Once cured the repair materials can withstand immersion temperatures up to 130°C & dry temperatures up to 240°C.

Making M-CERMAC 403 – ideal for applications where high temperature and abrasion are present or possible chemical contact.

The material can be applied up to 10mm in a single application without shrinking. Normal application method is by plastic applicator tool, trowel, and spatula.

Typical Uses

- Internal Protecting for Pneumatic Pipework
- Wear Resistant lining for Glass Processing Equipment
- Wear Resistant Lining for Dryers, Cyclones & Silos
- Create Wear Plates
- Protect Pipe Elbows
- As a filler for lost Ceramic Wear Tiles

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.

Surface Preparation - Manual

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

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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 10°C or less than 3°C above dew point.

Mixing
Mixing full units or by part-mixing.

- If mixing the whole unit, please ensure as much of the base and activator is dispensed from the plastic container onto a clean plastic mixing surface.
- Mix using the spatula provided until a uniform material free of any streakiness is achieved while ensuring no unmixed material is left on the spatula or the mixing surface.
- For part mixing, using a spatula place 2 equal measures from the base unit onto a clean plastic mixing surface. Clean the spatula thoroughly and then take 1 equal measure from the Activator unit and place alongside the Base measures. Mix as above.

Use all mixed material within 25 minutes at 20°C.

Product Application

- The mixed material should be applied directly to the prepared metal surface at a minimum thickness of 3mm using a spatula or applicator tool.

Technical Information

Appearance	Base	Grey paste
	Activator	Blue paste
	Mixed	Mid grey paste
Mixing Ratio	By Weight	2:1
	By Volume	2:1
Density	Base	2.21
	Activator	2.26
	Mixed	2.24
Volume Capacity		2240cc/5kg
Solids Content		100%
Sag Resistance	Nil at	10mm

Usable Life	10°C 20°C 30°C	50 minutes 25 minutes 15 minutes
Coverage	5kg at a nominal thickness of	0.747m² at 3mm 0.373m² at 6mm
Cure Times @ 20°C	Minimum overcoating time Maximum overcoating time Full Cure	6 hours 12 hours 3 days
Storage Life	Unopened and stored in dry conditions (15-30°C)	5 years
Abrasion Resistance	Taber H10 Wheels/1 Kg load	42mm³ loss/1000 cycles
Adhesion Pull-Off	Test to ASTM D4541 on abrasive blasted mild steel with 75 micron profile	272kg/ cm² (3840psi)
Adhesion Tensile Shear	Tested to ASTM D1002 on abrasive blasted mild steel with 75 micron profile	272kg/ cm² (3840psi)
Compressive Strength	Tested to ASTM D 695	1046kg/cm² (14880psi)
Corrosion Resistance	Tested to ASTM B117	1000 hours
Flexural Strength	Tested to ASTM D790	475kg/cm² (6710psi)
Impact Resistance	Tested to ASTM D256	22J/m
Hardness	Shore D to ASTM D2240	89
Heat Resistance	Full immersion resistance water/ hydrocarbon immersion to 130°C Dry heat resistance Tested to ASTM D2485	Pass (no blisters) Pass 240°C

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.

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