

M-CERAMIC 200 – EPOXY CERAMIC COATING

M-CERAMIC 200 - Epoxy Ceramic Coating

Is a solvent free Epoxy Coating with the addition of graded silicon carbide fillers. Once cured the material offers excellent erosion and corrosion resistant properties.

The product is designed for the long-term protection of Worn Pumps Components or for plant and equipment, suffering material lose due to erosion, corrosion such as Heat Exchangers.

The material is supplied as a 2-component product (PART A & PART B), that requires mixing before use, once mixed the product can be applied directly to prepared metal surfaces by brush, squeegee or plastic applicator.

Typical Uses

- Repair Worn Pump & Valve Components
- Protect Ships Rudders, Bow Thrusters & A-Frames
- As a coating for Condensers & Heat Exchangers
- Wear Resistant coating for Fan Casings and Blades
- As a smooth lining for Internal Pipe Protection

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

- 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

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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 **3:1 by volume or 8:1 by weight**
- When mixing both materials, it is particularly important to have a uniform light grey or dark grey fluid that is streak free.
- Once mixing is complete, use the mixed paste as soon possible after mixing.

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

Product Application

- Apply the mixed material directly to the prepared surface as soon as possible after mixing. For best results the material has been designed to be applied as a two-coat system.
- **Basecoat** should be applied directly to prepared and cleaned metal surface at a minimum wet film thickness of 250 microns. (Dark grey fluid) using a short-bristled brush, spatula, squeegee, or plastic applicator.
- **Topcoat** should be applied directly over the basecoat at a minimum wet film thickness of 250 microns. (Light grey fluid).
- The topcoat should be applied over the base coat as soon as possible after application but not exceeding 6 hours, using a short-bristled brush, spatula, squeegee, or plastic applicator.

Technical Information

Appearance	Base	Light grey or blue paste
	Activator	Amber liquid
	Mixed	Thixotropic dark grey or blue fluid
Mixing Ratio	By Weight	8:1
	By Volume	3:1
Density	Base	2.65
	Activator	1.0
	Mixed	2.24

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Volume Capacity		446cc/kg
Solids Content		100%
Sag Resistance	Nil at	400 microns
Usable Life	10°C	45-50 minutes
	20°C	20-25 minutes
	30°C	10-12 minutes
Coverage	Per 1kg	1.78 sqm/kg at 250 microns
		1.48 sqm/kg at 300 microns
		1.28 sqm/kg at 350 microns
Cure Times @ 20°C	Minimum overcoating time	2 hours
	Maximum overcoating time	6 hours
	Full Cure	2 days
Storage Life	Unopened and stored in dry conditions (15-30°C)	5 years
Abrasion Resistance	Taber CS17 Wheels/1 Kg load	20mm ³ loss/1000 cycles
Adhesion Pull-Off	Tested To ASTM D4541 on abrasive blasted mild steel with 75-micron profile	244 kg/ cm ² (3480 psi)
Adhesion Tensile Shea	Tested to ASTM D1002 on abrasive blasted mild steel with 75-micron profile	202kg/ cm ² (2875psi)
Compressive Strength	Tested to ASTM D 695	960kg/cm ² (13650psi)
Corrosion Resistance	Tested to ASTM B117	5000 hours
Flexural Strength	Tested to ASTM D790	635kg/cm ² (9,000psi)

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Hardness	Rockwell R to ASTM D785	100
Heat Distortion	Tested to ASTM D648 at 264psi fibre stress.	20°C Cure 48°C 100°C Cure 95°C
Heat Resistance	Suitable for use in immersed conditions at temperatures up to: Resistant to dry heat up to:	70°C 200°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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