

MAXCERAM 500 – HIGH TEMPERATURE EPOXY CERAMIC COATING

Description	<p>MAXCERAM 500 – HIGH TEMPERATURE EPOXY CERAMIC COATING is an erosion and corrosion resistant coating formulated using the latest solvent free epoxy novolac technology, enhanced further with the addition of several grades of high-quality silicone carbide ceramic fillers.</p> <p>Designed principally for the long-term protection of fluid-flow and process equipment commonly found in the oil, gas and chemical industries</p> <p>Once cured MAXCERAM 500 – HIGH TEMPERATURE EPOXY CERAMIC COATING provides a hard-wearing sacrificial barrier, protecting the parent metal from erosion, corrosion and wear at elevated temperatures up to 130°C continuous immersion dependant on the application</p> <p>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, squeegee or plastic applicator.</p>
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Applications	<ul style="list-style-type: none"> • Pumps • Valves • Scrubber units • Evaporators • Heat exchangers • Process equipment • Tanks & vessels • Fans • Pipework
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Surface Preparation Steel	<p>All oil and grease must be removed from the surface of the repair using an appropriate cleaner such as MEK or similar solvent. For optimum performance, the surface should be grit-blasted to ISO 8501/4 Standard SA2.5 (SSPC SP10/ NACE 2) and a minimum blast profile of 75 microns using an angular abrasive.</p> <p>Once blast cleaned, the surface must be degreased and cleaned using MEK or similar solvent. All surfaces must be repaired before gingering or oxidation occurs</p>
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Surface Preparation Salts

For salt contaminated surfaces the area must be grit-blast cleaned as mentioned above and left for 24 hours to allow any ingrained salts to come to the surface.

After this 24-hour period the surface must be washed with MEK prior to brush blasting to remove the surface salts. This process must be repeated until all ingrained contaminants have been sweated out of the surface.

Mixing

Warm the Base component to 15-25°C before mixing and do not apply when the ambient or substrate temperature is below 5°C or less than 3°C above dew point.

Mix both Part-A and part-B together in full units as supplied.

When mixing both materials, it is very important to have a uniform grey paste that is streak free. Once mixing is complete, use the mixed paste as soon possible after mixing.

Application

Only full units of material should be mixed and to aid mixing add only part of the PART A initially. Pour approximately one third of the contents of the PART A unit into the PART B container and mix carefully using a spatula.

Once the two materials have been blended, add the remainder of the PART A ensuring that as much material is drained from the PART A container as possible. Mix the two components together until they are streak-free and apply using a short-bristled brush or applicator tool. The material once fully mixed has an application of time of 30-40mins at 20°C.

Two Coat Application

Where possible, the application should be carried out in two coats.

a) The first coat of material should be applied at a target thickness of 600 microns, use a plastic applicator as a squeegee to apply a **very** thin layer of product, forcing it into the blast profile. Special attention should be paid to detailed areas such as edges, corners and welds where brush application by stippling may be required.

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Application

Continued:

Immediately after the initial application apply further material by brush or applicator to give the required film build, checking film thickness with a wet film thickness gauge. Lay off the coating by brush to give a smooth finish.

b) Allow to harden for a minimum of 16 hours before removing any surface bloom by washing first with a detergent and water mixture and then clean water. This should be followed by sweep blasting at reduced pressure using fine grit, and removal of any debris before washing with MEK.

c) The second coat of material should be applied at a target thickness of 300 microns using a brush or applicator and once again checking film thickness with a wet film gauge before finally laying off the coating with a brush to give a smooth finish.

Single Coat Application

If a two-coat application is not practical, the product can be applied as in (a) above in a single coat at 650-850 microns.

Using this method extreme care is required when carrying out visual inspection of the coating (whilst still wet) to identify any defects which should be corrected.

Once cured any surface bloom should be removed by detergent wash and the coating then wet sponge tested to identify any pin holes.

These should be repaired by manually abrading the surface, cleaning down and applying freshly mixed **MAXCERAM 500 – HIGH TEMPERATURE EPOXY CERAMIC COATING** at approximately 250 microns to the prepared area.

Pot Life

20 - 30 minutes at 20°C

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Coverage

1.415m² at 300 microns
 1.063m² at 400 microns
 0.850m² at 500 microns
 0.708m² at 600 microns
 0.607m² at 700 microns
 0.531m² at 800 microns

The coverage rate stated is theoretical, practical coverage may vary due to substrate temperature, poor surface profile or pitting.

Cure Times

MAXCERAM 500 – HIGH TEMPERATURE EPOXY CERAMIC COATING is designed for elevated temperature service in all situations requires post cure. After an initial cure period of at least 24 hours at 20°C it should be post cured at between 60°C for 24 hours and 100°C for 2 hours.

As an alternative and where service temperature will rise gradually the material can be post cured in service after an initial cure period of at least 24 hours at 20°C

Movement without load or immersion	3 hours
Light loading	24 hours
Full loading	1.5 days
Immersion	3 days

Over-Coat Times

Minimum – the applied material can be over-coated as soon as it is touch dry.

Maximum – over-coating time **3 hours**

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

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Health and Safety

Please ensure good practice is always observed during the mixing and application of this product.

Protective gloves must be worn during the mixing and application of this product. Before mixing and applying the material please ensure you have read the fully detailed Material Safety Data Sheet.

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.