

MCH400 APG-REV1- 2018

## MAXCHEM 400 – HIGH TEMPERATURE CHEMICAL COATING

#### **Description**

MAXCHEM 400 - HIGH TEMPERATURE CHEMICAL RESISTANT EOPXY NOVOLAC **COATING** is a high build solvent-free high functionality epoxy novolac coating designed to provide outstanding chemical and corrosion protection of steel and concrete structures at elevated temperatures.

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**COATING** is particularly resistant to strong acids and concentrated industrial chemicals including 98% sulphuric, 36% hydrochloric.

Once cured the material is capable of withstanding temperatures up to 90°C continuous immersion, dependent on chemical contact.

#### **Applications**

Chemical Pumps, Impellers, Casings & Cutwaters

Vessel lining

Chemical Storage Tank Lining

**Bunds & Containments Areas** 

**Chemical Channels and Drains** 

Chimney Stacks

**Process Equipment** 

# **Surface Preparation** Steel

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.

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

# 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.



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# **Surface Preparation** Concrete

Remove any contamination and lightly abrasive blast or scarify taking care not to expose the aggregate.

Allow new concrete to cure for a minimum 21 days and remove any surface laitance before coating. Ensure the moisture content of the concrete is below 8% for Continued:

MAXPRIME 100 - CONCRETE SURFACE PRIMER or less than 25% for MAXPRIME 200 – DAMP TOLERANT CONCRETE PRIMER. Suitable for applications where the surface temperature is 5°C or above

### **Priming** Concrete

Using MAXPRIME 100 or MAXPRIME 200 - Mix the base component (amber liquid) with the activator component (amber-liquid) in full units as supplied, ideally, use slow speed paddle mixer. When mixing both materials, it is essential to have a uniform streak free fluid.

Once mixed, the material should be used within 25 minutes at 20°C.

Please see relevant application guide for each primer

#### **Mixing**

Warm the Base component to 15-25°C before mixing and do not apply when the ambient or substrate temperature is below5°C or less than 3°C above dew point.

Mix the PART - A (amber fluid) with PART - B (red or grey) in full units as supplied.

For small quantities us a mixing ratio of:

5.34:1 BY VOLUME OR 4:1 BY WEIGHT

When mixing both materials, it is very important to have a uniform streak free fluid.

Once mixing is complete, the material should be used within 20-25 minutes at 20°C. To ensure best results use the mixed fluid as soon possible after mixing.



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### **Application**

Basecoat - Apply the mixed material onto the prepared surface by brush or roller. The basecoat should be applied at a minimum target film thickness of 250 microns.

Topcoat - Apply the second coat at a target thickness of 250 microns as soon as possible after the first coat is dry and not in excess of 6 hours.

Spray applications - use sufficient passes to achieve a minimum thickness of 500 microns, checking the film thickness regularly with a wet film thickness gauge and brushing out the test marks. As a guide, 1 litre of material should be sufficient to cover 1.6 sq metres allowing for wastage

#### Coverage

1 litre of mixed product will cover 4 sq metres at a nominal film thickness of 250 microns per coat.

#### Pot Life

20 - 20 minutes

#### **Cure Times**

At 20°C the applied materials should be allowed to harden for the times indicated below before being subjected to the conditions indicated.

These times will be extended at lower temperatures and reduced at higher temperatures:

- Movement without load or immersion 6 hours
- Light loading 12 hours
- Full loading/water immersion 4 days
- Chemical Contact 7 days

For optimum performance, after an initial curing period of at least 12 hours at 20°C, raising the cure temperature progressively to 60 - 80°C for up to 8 hours will result in improved chemical resistance properties.



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### **Overcoat Times**

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

Maximum – over-coating time 6 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

# **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.