

### M-CORR 700 – HEAT ACTIVATED CORROSION UNDER INSULATION COATING

#### M-CORR 700 - Heat Activated Corrosion Under Insulation Coating

Is high performance, single pack epoxy novolac coating. The product once cured provides excellent chemical and corrosion resistance at elevated service temperatures.

To enable full material cure **M-CORR 700** must be applied to hot metal surfaces at temperatures ranging between **(100°C – 150°C)**. Once cured the material is suitable for dry heat applications up to 220°C or immersed conditions up to 60°C

Due to the application requirements of M-CORR 700 the material is suited for applications to live pipework and process equipment running above the minimum **100°C**. The material is particularly effective as a coating system to combat the negative effects of corrosion under insulation (CUI).

#### Typical Uses

- External pipe protection
- Reactor protection
- Vessel protection

Please contact us to discuss your project before purchasing this material to confirm suitability.

#### Application Guide

##### Surface Preparation - Metal - 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 pickling or oxidation.

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### Surface Preparation - Metal - Hydro-Blast

- All surfaces must be hydro-blasted using clean water at 12,000 psi (850bar) to NACE 5 (SSPC SP13 WJ3-WJ1).
- All surfaces must be coated before gingering or oxidation occurs.

### Surface Preparation - Metal -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.

### Surface Preparation - Cold Surfaces

PLEASE NOTE: The coating can be applied to cold surfaces, however after application the coated surface must be heated to 100°C+ for the coating to cure. Heat must be applied until the coating has cured hard.

### 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.

### Mixing

- Single component material.

### Product Application

#### Brush & Roller

- Pour the mixed material into a paint kettle or paint tray (this will maximise the usable life).
- Stripe coat all edges, joints & corners at approximately 100mm wide, at 200-300microns wet film thickness.

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- Once the stripe coat has cured and is capable of being overcoated, apply a basecoat at a minimum wet film thickness 400 microns.
- Once the basecoat has cured sufficiently, apply a topcoat at a minimum wet film thickness of 400 microns.

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### Technical Information

Appearance	Single Component	Red thixotropic material
Mixing Ratio	Single Pack	Ready to use
Density		1.40
Solids Content		100%
Sag Resistance	Nil at	650 microns (100°C) 500 microns (150°C) 350 microns (240°C)
Usable Life	10°C 20°C 30°C	60 minutes 30 minutes 15 minutes
Coverage	The material should be applied in two coats at 400 microns WFT per coat. At this WFT the coating will have a theoretical coverage rate of 2.5m <sup>2</sup> per ltr per coat.	2.5m <sup>2</sup> per ltr per coat
Cure Times	Touch dry	100°C 50 minutes 150°C 3 minutes 200°C 20-30 seconds 240°C 10-15 seconds

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Storage Life	Unopened and stored in dry conditions (15-30°C)	2 years
Tensile Shear	ASTM D1002 – abrasive blasted mild steel with 75-micron profile	197 kg/ cm <sup>2</sup> (2800 psi)
Pull off Adhesion	ASTM 4541 – abrasive blasted mild steel with 75-micron profile. Immersed in water at 4 °C for 120 hours, steel plate heated to 75 °C, followed by dry exposure at 200 °C for 120 hours.	>21 MPa (3045 psi)
Corrosion Resistance	Tested to ASTM B117	5000 hours
Flexural Strength	Tested to ASTM D790	518kg/cm <sup>2</sup> (7350psi)
Hardness	Shore D to ASTM D2240	100 °C 86 150 °C 80 200 °C 72
Intercoat Adhesion with Thermoplastics	Application of Polypropylene at 150 °C	Cross Hatch Adhesion- Pass
Cathodic Disbondment	Tested to ISO 21809-3 Annex F in 3% NaCl at 1500mV 23 °C for 28 days.	Average 4 mm (pass)
	Tested to ISO 21809-3 Annex F in 3% NaCl at 1500mV at 65 °C for 28 days.	Average 4 mm (pass)
Immersion Resistance	Tested with coated steel immersed in water at 4 °C for 120 hours with the temperature of the steel at up to 75 °C, followed by dry exposure at 200°C for 16.7 hours	No change in thickness of coating or any Disbondment
Heat Resistance	Suitable for use in dry conditions at temperatures up to:	60°C

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Resistant to dry heat up to 240°C dependent on load

### Legal Notice

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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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