MAXKOTE

APPLICATION GUIDE

APG-REV2- 2022

M-CERAMIC 600 – EPOXY CERAMIC UNDERWATER COATING

M-CERAMIC 600 – Epoxy Ceramic Underwater Coating

Is a flexible high build solvent-free epoxy coating designed for application to wet or underwater surfaces.

The ceramic enhanced product provides long term protection for steel and concrete structures against corrosion, abrasion, and chemical attack.

The product cures at 5°C and is applied in a single coat at 750 microns to 1mm thickness.

Typical Uses

- Subsea Structures
- Buried and Submerged Pipelines
- Protect Risers Legs
- Oil Rig Splash Zones
- Corrosion Barrier for Piers and Jetties

Application Guide

Surface Preparation

- The surface to be coated must be free of any marine life such algae or barnacles, any degraded coating or surface corrosion must be cleaned from the surface.
- For the best results the underwater repair surface can be hydroblasted at a minimum pressure of 3000psi. This method of preparation will ensure the majority of surface contaminants will be cleaned from the surface.
- If it is not possible to hydro-blast the surface, then handheld scrapers and chisels can be used to clean the surface. If possible, a rough pad should be used to try and take away any loose coating or surface corrosion.
- Please be aware that this type of surface preparation will reduce the performance of the coating.

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.

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Mixing

- Transfer the contents of the Activator unit into the Base container.
- Using the spatula provided, mix the 2 components until a uniform material free of any streaks is achieved.

Use all mixed material within 45 minutes at 20°C.

Product Application

- The material has been designed to be applied to underwater surfaces in a single coat at 750 microns to 1mm wet film thickness.
- Using the applicator tool provided the material should be pressed onto the surface.
- Ensure you do not over work the coating once applied onto the underwater surface, as a general rule if the coating has covered the repair area then leave it to cure.
- You can dress or smooth off the coating after a minimum of 4 hours after application using a gloved hand.

Technical Information

Appearance	Base	Grey liquid
	Activator	Amber liquid
	Mixed	Grey liquid
Mixing Ratio	By Weight	6.75:1
	By Volume	4:1
Density	Base	1.67
	Activator	0.99
	Mixed	1.54
Volume Capacity		649cc/1kg
Solids Content		100%
Sag Resistance	Nil at	1000 microns
Usable Life	10°C	90 minutes
	20°C	45 minutes
	30°C	22.5 minutes

Coverage	1kg at a nominal thickness of	1.333m² at 750 microns 1m² at 1000 microns
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	38mm³ loss/1000 cycles
Adhesion Tensile Shear	Tested to ASTM D1002 on blasted mild steel with 75-micron profile Tested to ASTM D1002 on blasted mild steel with 75 micron profile (wet)	184kg/ cm² (2610psi) 176kg/ cm² (2500psi)
Corrosion Resistance	Tested to ASTM B117	5000 hours
Flexural Strength	Tested to ASTM D790	614kg/cm² (8710psi)
Impact Resistance	Tested to ASTM D256	32J/m
Hardness	Shore D to ASTM D2240	20°C 80

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