



EmO Guard CR 500

**High chemical and temperature resistant,
 Novolac Epoxy protective coating.**

Uses

EmO Guard CR 500 is an epoxy novolac coating designed to provide protection to steel and concrete structures in aggressive chemical conditions. The material is particularly suitable in petroleum refineries, chemical manufacturing plants, fertilizer and insecticide plants, waste water treatment plants, desalination plants, food processing plants, pulp and paper mills and electric power plants.

EmO Guard CR 500 may be used with ELMIERE anti-slip grains as a heavy duty floor coating in application such as chemical processing and drum storage areas, loading docks and ramps. It may also be used in conjunction with glass fiber cloth to increase the thickness of the system or to reinforce structures subjected to aggressive chemicals.

Advantages

- EmO Guard CR 500 is 100% solids, no solvents
- EmO Guard CR 500 exhibits excellent chemical resistance in PH ranging from 1 – 14 at 25⁰c
- It has excellent adhesion to steel, concrete and other substrates
- EmO Guard CR 500 has excellent abrasion resistance

Description

EmO Guard CR 500 is a solvent free, highly crosslinked, high build epoxy-novolac-based coating. EmO Guard CR 500 is a two part material and can be applied by brush, roller or air less spray. It is formulated to achieve a minimum total-dry-film thickness of 500 microns. Higher thickness can be specified.

Specification

Chemical and abrasion resistant lining

The chemical and abrasion resistant coating shall be EmO Guard CR 500, a high build, two-pack epoxy-novolac system specially designed to provide a tough and impermeable high chemical resistant film.

Typical Properties

The following results have been derived under laboratory conditions, and may vary slightly from those achieved on site:

Solid content	:	100%
Finish	:	Gloss
Pot life	:	35 min @ 23 ⁰ c 20 min @ 35 ⁰ c
Tack free time	:	4 -6 hours @ 35 ⁰ c 8 – 10 hours @ 25 ⁰ c
Over coating time	:	< 16 hours@ 25 ⁰ c < 10 hours@ 35 ⁰ c

Full cure	:	days @ 25 ⁰ c
		5 days @ 35 ⁰ c
Compressive strength	:	80N/mm ² @ 7 days
Flexural strength	:	35N/mm ² @ 7 days
Hardness	:	80 Shore D
Abrasion resistance	:	0.10 mg/cycle (1 kg, H-22 Wheels)
Service temperature	:	< 60 ⁰ c

Note: Excessive loading should be avoided for 7 days after application.

Chemical Resistance

EmO Guard CR 500 is resistant to spillages of the following when tested accordance with ASTM D 1308 Cl. 3.1.2.

Acids (m/v)

Hydrochloric acid 25%	:	Resistant
Sulphuric acid 30%	:	Resistant
Citric Acid 50 %	:	Resistant
Acetic Acid 50%	:	Resistant

Alkalis (m/v)

Sodium hydroxide 10%	:	Resistant
Ammonia 35%	:	Resistant

Solvents & Organics

Petrol	:	Resistant
Skydrol	:	Resistant
Diesel	:	Resistant

Brake fluid	:	Resistant
Engine oil	:	Resistant
Ethylene glycol	:	Resistant
Propylene glycol	:	Resistant
Kerosene	:	Resistant

Aqueous solutions

Water (tap, distilled, potable):	Resistant
Sodium chloride (sat)	: Resistant

Directions for Use

Preparation of steel surfaces

All surfaces should be grit blasted to meet the requirements of BS 4232, First quality.

The lining work should be programmed so that newly cleaned steel is coated as soon as possible before the formation of rust or scale.

Preparation of concrete surfaces

All surfaces, which are to receive the lining, must be at least 28 days old and have a moisture content of not less than 5%. These surfaces shall be dry, sound and free from debris and loose material. Ensure the concrete foundation surface is dimensionally stable and free of dirt, dust, oil, laitance, paint, curing compounds etc. Bolt holes and fixing pockets should be free from any dirt or debris. If possible a roughened surface is preferable to smooth surfaces. Metal surfaces must be free from rust, loose scaling and paint. Shuttering should be covered with polyethylene to ensure a clean release.

Priming

EmO Guard CR 500 is designed to be used without primer. However, if the conditions of the concrete substrate require priming, EmO Guard MP Primer can be used.

Mixing

It is imperative that the resin be thoroughly mixed with the hardener in the exact ratios to ensure optimum performance. Therefore, the entire contents of the hardener should be added to the base container and mixed until a uniform color and consistencies are obtained, taking particular care to scrape the sides and bottom of the container. It is recommended that mechanical mixing be employed using a jiffy mixer on a slow speed electric drill.

Application

Once mixed, EmO Guard CR 500 should be immediately applied to the prepared surface ensuring a continuous coating of uniform thickness is obtained. Stiff nylon brush or short nap roller is recommended for such application. Faster rate of application is possible using air less spray equipment.

Re-coating

To re-coat, it is imperative that the second coat be applied with in the specified over-coating time.

Cleaning

EmO Guard CR 500 should be removed from tools and equipment with clean water immediately after use. EmO Guard MP primer should be removed using **ELMIERE Solvent EP**

Limitations

- Substrate ambient and product temperature must remain above 15⁰c during application and curing. Minimum material / container temperature for spray application is 20⁰c. Avoid moisture contamination.
- EmO Guard CR 500 should not be applied on to surface known to, or likely to suffer from, rising dampness, potential osmosis problems or have a relative humidity greater than 75% as measured in accordance with BS 8203 APPENDIX a, or by a Hammond concrete/mortar moisture tester type COCO.
- Application should not be undertaken if the temperature is below 5⁰c, or is 5⁰c and falling, nor when the prevailing relative humidity excess 90%.
- EmO Guard CR 500 may not be color stable when in contact with some chemicals or direct sunlight. The color change will not affect the performance of the protective coating either on concrete or steel.

Packaging & Storage

Supply

EmO Guard CR 500	:	5 liter packs
EmO Guard MP Primer	:	5 liter packs

Coverage

EmO Guard CR 500 : 0.5m²/litre @ 500 microns

EmO Guard MP Primer: 0.1m²/litre @ 100 microns



Health & Safety

Precautions

EmO Guard products does not fall into the hazard classifications of current regulations. However, it should not be swallowed or allowed to come into contact with skin and eyes. Suitable protective gloves and goggles should be worn. Splashes on the skin should be removed with water. In case of contact with eyes rinse immediately with plenty of water and seek medical advice. If swallowed seek medical attention immediately – do not induce vomiting.

Important note

ELMRR endeavors to ensure that the technical information contained herein is true, accurate and represents our best knowledge and experience. No warranty is given or implied, as ELMRR has no control over the conditions of use and the competence of any labor involved in the application are beyond our control. As all ELMRR technical data sheets are updated on a regular basis it is the customer's responsibility to check that the product is suitable for the intended application, and that the actual conditions of use are in accordance with those recommended.

FIRE

EmO Guard CR 500	:	Flammable
ELMIERE Solvent EP	:	Flammable
EmO Guard MP Primer	:	Flammable

Manufactured By:

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