

Anti-corrosion protection system

M-Guard Epoxy Prime

Two-component epoxy primer for metals

Usage and Properties

It is used as a primer for steel, galvanized surfaces, aluminum, for devices in the chemical industry, in power plants, metal structures, bridges and shipbuilding. Also as an intermediate layer to two-component zinc paint. In a dry atmosphere, the paint withstands up to 180 °C, in a humid and chemically aggressive atmosphere up to 130 °C.

In a system with an appropriate interlayer and cover coating, it is suitable for exposure in an industrial or marine atmosphere - C 4 according to ISO EN 12944.

Highlights

- long-term active anti-corrosion protection
- quick drying
- does not contain lead and chromates
- very good adhesion to metals
- the coating is very resistant to chemicals

Field of application

- in a system with a suitable primer it is suitable for exposure in industrial and marine atmospheres
- suitable for direct contact with various media

Technical properties*

Packing	A	0.6 L
	B	0.15 L
Mixing ratio	By weight	A : B = 6.5 : 1
	By volume	A : B = 4 : 1
Pot life	Temperature	10 °C 20 °C 30 °C
	Time [h]	10 6 4
Temperature		3°C above the dew point temperature
Humidity		Minimum 30% and maximum 85% relative humidity
Dilution		Chemcolor NITRO THINNER
Drying time	Temperature [°C]	10 °C 20 °C 30 °C
		60 / 240 30 / 90 20 / 75
dust dry / dry to the touch	Time [min]	
through dry	Time [days]	7 5 3
Intercoat interval	Minimal	5 h at 25 °C 24 h at 5 °C
	Maximum	30 days
Recommended film thickness	Wet	approx. 160 microns
	Dry	80 microns
Theoretical consumption	80 µm dft	6.3 m ² / L 4.6 m ² / kg
Shade		white, beige, oxide red, grey
Gloss		matt
Solid content	Weight	67 ± 2%
	Volume	50 ± 2%
Density	Mixture	1.330 g/ml
Viscosity	ISO 2431	40 s F6 (20°C)
Adhesion		ISO: 0 / ASTM: 5B
VOC content		IIA(i), 500 g/l (2010); the product contains: max. 490 g/l

(*All technical data stated in this data sheet are based on laboratory tests. Actual data may deviate depending on the circumstances of use, which are beyond our control. dft-dry film thickness)

Preparation of substrate

Good practice

The surface must be dry, clean, free of impurities, grease stains, rust, slag residues, salt or other contaminants that would prevent good adhesion. Welds, repaired surfaces, joints and surface damage discovered during surface preparation must be properly cleaned and treated before applying paint.

Surfaces that have oxidized after preparation and prior to painting must be treated to an appropriate standard. Study the prescribed standards. Please contact Chemcolor Technical Services for further advice.

Metals

Clean the surfaces with solvents to remove impurities such as oil, grease, salt, dirt, markings before preparing the surface for painting. Highly exposed surfaces or surfaces intended for immersion must be prepared according to the ISO 8504-2 method or sandblasted according to ISO 8501-1 SA 2.5. After cleaning, we should get a clean surface with a roughness between 25 and 50 microns.

Restoration of old coatings

Prepare the surface by cleaning with solvents to remove impurities. Use ISO 8501-1 St 2 hand cleaning or ISO St 3 machine tool cleaning to remove corrosion and loose paint and prepare the surface to standard. Cover the edges of the well-adhered paint by 5-10 cm with a new paint - primer. Sand the shiny surfaces to provide a grip profile. Do a test patch to ensure the compatibility of the old and new paint.

Application conditions

The temperature of the substrate must be at least 3 °C above the dew point during application.

Temperature: 5 ° - 30 °C

This temperature applies to air, surface and material. The surface must be visibly dry.

Relative humidity: 30% - 85%

Preparation of material

Before use, we recommend warming both containers to room temperature (20 °C, minimum 15 °C). The mixing ratio is 6.5 : 1 by weight or 4 : 1 by volume, and the pot life is approximately 6 h at 20 °C under normal working conditions. Do not apply the coating after the pot life has elapsed, as problems with adhesion, drying or gloss may occur.

Add component B to component A in the specified ratio and mix thoroughly with an electric mixer for 2-3 min at low speed (300-400 min⁻¹). To avoid mixing errors, transfer the mixture to a clean container and briefly mix again.

M-Guard Epoxy Prime can be applied by brush, roller, airless spray or conventional spray. Stir well before application. Cover the paint in opened containers with thinner, seal tightly and use within a short time.

Brush/roller

Brush: Natural fibers

Roller: Natural or synthetic

Thinning: 0-5 % Chemcolor NITRO thinner

Airless

Pressure: 170-200 Bar

Nozzle: .013-.021

Thinning: 10 % Chemcolor NITRO thinner

Air spraying

Air nozzle: 1.3 – 2.2 mm

Air pressure: 3.1 - 4.1 bar

Thinning: 5-10 % Chemcolor NITRO thinner

Application with a brush or roller is suitable for small areas and local corrections. Brush application, compared to spraying, requires more coats to achieve the prescribed dry film thicknesses. Thinning depends on application conditions and paint temperature.

Cleaning

Nitro thinner

Coating systems

Both one- and two-component varnishes and enamels can be used as finishes over M-Guard Epoxy Prime.

M-Guard Topcoat M-Guard Top-Prime

Cleaning of tools and surfaces after use

Tools and work equipment are cleaned immediately after finishing work with Chemcolor Nitro thinner or mechanically.

Storage of material

The shelf life of the product in well-sealed, undamaged original packaging, stored in a dry place at a temperature between +5°C and +25°C, is 12 months from the date of manufacture.

Remarks

All technical data stated in this data sheet are based on laboratory tests. Actual data may vary depending on usage circumstances beyond our control.

In no event shall Chemcolor's liability for a claim of any kind, such as negligence or strict liability for loss or damage arising out of work performed in connection with or resulting from the use of the products, exceed the purchase price of the products or part of the products giving rise to the claim. In no event shall Chemcolor be liable for consequential or incidental damages.

Protective measures:

- When applying the coating in enclosed, unventilated spaces, forced ventilation must be provided. Do not apply the material near open flames or welding.
- Protective equipment must be worn during work; gloves, goggles and more.
- Before eating and after finishing work, it is necessary to change dirty clothes and wash hands.
- The safety warnings on the packaging label must be observed.

Important warnings:

- Uncured/unbound material must be disposed of in accordance with legal regulations. Fully hardened material can be disposed of in municipal landfills in accordance with legal regulations.
- Detailed safety measures, physical, toxicological and ecological data for the product are listed in the safety data sheet, which is available from the Chemcolor sales department or on the website www.chemcolor.si.

This information is based on our experience and careful research. Site working conditions and knowledge of the work affect the quality of application. Successful results depend on a professional assessment of the substrate at the outset and practical experience in selecting the appropriate product. Follow the manufacturer's recommendations and the safety data sheet for this product.