EPINOX 77

Epoxy primer

Epoxy primer, MIO pigmented, thixotropic, high solid, two component, cured in low temperatures (from -10°C).

For priming ship's steel hulls, steel constructions operating in sea, coastal and industrial environment, steel and cast iron constructions exposed to destructive mechanical factors. For self-protection of steel constructions and elements when high decorative value of coating is not required, steel tanks for most of chemical media, i.e. water, sewage, petroleum products, ship's holds and internal surfaces.

Flexible and hard coating with good adhesion to surfaces and resistant to mechanical factors. The coating resistant to water, salt and alkali solutions, oil, fuel oil, diesel, motor gasoline and some organic solvents. Coating resistant to the elements occurring in the cathodic protection. When exposed to sun radiation, the tint of the coating may change and the coating may be chalking.

TECHNICAL DATA

Fields of application	Machinery, Ship, Steel constructions, Storage tank
Recommended substrate	Cast iron, Steel
Binder	Epoxy
Solids	73±2% by volume
Total mass of solids	Approx. 1300 g/l
Volatile organic compound (VOC)	Approx. 300 g/l (DIRECTIVE 2010/75/EU) The VOC value provided is the average value for factory produced products, and consequently it will be subject to variations between individual products covered by this Technical Data Sheet.
Theoretical spreading rate	See table below As many of the paint's properties will change if too thick coats are applied, it is not recommended that the product is applied to a film thickness that is more than double of the thickest recommended film.
Practical spreading rate	The values depend on the application technique, surface conditions, overspray, etc.
Colours	TO-250 red oxide, TO-860 light grey, TO-990 black
Gloss (60°)	Semi-gloss

Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m^2/l)
100	137	7.3
150	205	4.9

Hardener	Comp. B: UTWARDZACZ 076/077/087/EPITAN 92
Mixing ratio (A:B)	100:20 parts by volume
Pot life, +23°C	2,5 h
Thinner	TEKNOSOLV 9506
Storage	The storage stability is shown on the label. Store in a cool place and in tightly closed containers.

DIRECTION FOR USE

Surface preparation	Before cleaning of surface, it is recommended to wash it with water with addition of OLICLEAN 123 and then rinse with fresh water. STEEL SURFACES: The surface to be treated must be dry, salt-, grease- and dust free, cleaned to the degree of cleanliness according to ISO 8501-1: Sa 2½ for submerged areas or at least St 3 for external surfaces. For internal surfaces at least St 2. Porous surfaces should be primed with tinted EPINOX 77 paint. Coating gets the highest mechanical and chemical resistance by applying directly to sandblast cleaned steel surfaces (cleanliness at least Sa 2½). STEEL SURFACE PREVIOUSLY PRIMED USING SHOPPRIMER: The surface to be treated must be dry and free of contamination. Rust, mechanical, thermal damage or any defects of surface should be cleaned to Sa 2 according to PN-ISO 8501-1 for submerged surfaces, St 3 for external above-water surfaces. For internal surfaces at least St 2. SHOPPRIMED COATING WITHOUT VISIBLE DEFECTS: The surface to be treated must be abrasive blasted (submerged surfaces) or roughened mechanically (external surfaces). EPOXY PAINT FOR PRIMING: The surface to be treated must be dry, salt-, grease- and dust-, corrosion free. Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.
Application method	Airless spraying, Brush

Application	Take into consideration the pot life of the mixture when estimating the amount to be mixed at a time. Before application the base and hardener are mixed in right proportion. Stir thoroughly down to the bottom of the vessel. Mixing by machine is recommended, for example a slow-rotating hand-drill equipped with a mixer. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired film properties. Apply by airless spray or brush. When using a brush it may be necessary to apply several layers to achieve recommended coating thickness. Airless spray parameter: Nozzle size 0.019 – 0.025" Nozzle pressure 20 - 25 MPa When preparing painting specification, depending on subject and type of construction, different dry film thickness than recommended can be assumed. During airless spray application typical dry film thickness range is between 80 and 200 µm. Different dry film thickness than recommended causes change in theoretical spreading rate, wet film thickness, weight of dry film thickness, drying time, overcoating time and ready for handling time. Single coating of dry film thickness 160 – 200 µm (wet film thickness 250 – 320 µm) can be used as a stand-alone protection of internal surfaces, for example for ship's holds. In high corrosive environment it is recommended to prepare surface as best as possible and to apply successive layers of paint before full curing of previous layers to achieve best protection.
Application conditions	During the application and drying period the temperature of the ambient air shall be above -10°C, of the paint should be over +15°C and the relative air humidity below 95%. The minimum temperature of the surface shall be above -5°C (frost- and ice-free surface) and at least 3°C higher than dew point of the ambient air. Adequate ventilation during application and drying period is recommended.

Drying time	+23°C / 50% RH (dry film 100 µm)
- dust free	after 2 h
- touch dry	after 6 h
- fully cured	after 2 days

Overcoatable

Surface temperature	By itself		By topcoats	
	Min.	Max.	Min.	Max.
-5°C	24 h	unlimited*	24 h	unlimited*
0°C	14 h	unlimited*	14 h	unlimited*
+5°C	9 h	unlimited*	9 h	unlimited*
+10°C	7,5 h	unlimited*	7,5 h	unlimited*
+20°C	6 h	unlimited*	6 h	unlimited*

*unlimited in internal conditions. It is a rule, that unlimited overcoating interval is for EPINOX 77. Due to higher sensitivity of topcoats to surface cleanness, overcoating time should be short. It is very important especially when applying non-epoxy systems or operating in aggressive environment. Given indications relates to the recommended coating thickness, drying in good ventilation conditions. Overcoating times may be different with a change of temperature, ventilation, number of layers and the thickness of the coating. In case of chalking, it is recommended to remove degradation products.

Cleaning	TEKNOSOLV 9506

HEALTH AND SAFETY

Safety and precaution measures	See safety data sheet.

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