

INERTA 280

Epoxy phenol novolac coating

INERTA 280 is an almost solvent-free epoxy coating based on epoxy phenol novolac resin.



The coating is used in epoxy coating systems for coating steel and concrete surfaces submerged under mechanical and chemical strain.

INERTA 280 has good adhesion to blast cleaned substrate and excellent wear resistance. INERTA 280 withstands well chemicals like saline solutions, alkaline solutions and mild acids. The resistance to aliphatic and aromatic hydrocarbons like solvents, oil and petrol is good. Withstands also water-ethanol blends.

APPROVALS:

The product has CE approval for protection of concrete structures.

TECHNICAL DATA

Certificates, approvals and classification	CE marking
Recommended substrate	Steel, Concrete
Binder	Epoxy phenol novolac
Solids	96 ±2% by volume
Total mass of solids	Approx. 1500 g/l
Volatile organic compound (VOC)	Approx. 50 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	Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m²/l)
	250	260	3.8
	400	416	2.4
	500	520	1.9
	600	625	1.6

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	Red, green and white. Other colours by agreement. NOTE! Sunlight and chemicals cause the colour and glossiness to change in time.
Gloss (60°)	Gloss
Hardener	Comp. B: INERTA 280 HARDENER
Mixing ratio (A:B)	2:1 parts by volume
Pot life, +23 °C	40 min.
Thinner	(max. 5%) TEKNOSOLV 6560, TEKNOSOLV 9514.
Storage	The storage stability is shown on the label. Store in a cool place and in tightly closed containers.

DIRECTION FOR USE

Surface preparation	<p>Remove from the surfaces any contaminants that might be detrimental to surface preparation and application. Remove also water-soluble salts by using appropriate methods. The surfaces are prepared according to the different materials as follows:</p> <p>STEEL SURFACES: Remove mill scale and rust by blast cleaning to preparation grade Sa 2½ (standard ISO 8501-1). The profile of the blast-cleaned surface must be at least coarse (reference comparator "G"). See standard ISO 8503-2 (G).</p> <p>CONCRETE SURFACES: The concrete must be at least 4 weeks old, well-hardened and solid. The water content of the top layer must not exceed 4% by weight. Smooth down any spatter and irregularities on the surfaces by grinding. Brush away loose cement, sand and dust. Wash oily and greasy surfaces with detergent or solvent. Remove dense laitance if present by etching with RENSA ETCHING etching liquid or by grinding or blast-cleaning.</p> <p>OLD PAINTED SURFACES SUITABLE FOR OVERCOATING: Any impurities that might be detrimental to the application of paint (e.g. grease and salts) are removed. The surfaces must be dry and clean. Old, painted surfaces that have exceeded the maximum overcoating time are to be roughened as well. Damaged parts are prepared in accordance with the requirements of the substrate and the maintenance coating.</p> <p>Before or after the first coat all dents and holes on the surface are to be filled with epoxy putty, which is prepared by mixing fine dry quartz sand with INERTA 280 mixture.</p> <p>The place and time of the preparation are to be chosen so that the prepared</p>
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surface will not get dirty or damp before the subsequent treatment.

Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.

Prefabrication primer: All prefabrication primer coats must be completely removed regardless of the binder type. In practice this means that when the surface is viewed vertically from a distance of 1 meter and in normal lighting conditions the surface is of an evenly grey colour, i.e. the preparation grade is Sa 2½ (ISO 8501-1).

Application method

Airless spraying, Hot twin feed-spraying

Application

MIXING OF THE COMPONENTS: 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.

BY TWIN-FEED SPRAY: For demanding areas it is recommended that the application is done by a hot twin-feed spray, e.g. Graco Hydra-Cat. Suitable nozzle size (turn-nozzle) 0.018 - 0.026".

The components must be kept at a temperature of +20 - +25 °C before use so that they are fluid enough for the feed pumps. The ratio of the dosage pump must be 2 : 1. The heating of the components shall be adjusted so that the temperature in the gun is +30 - +40 °C. The pot life of the mixture is then 10 - 20 min. If necessary, the hoses must be heated. The film thickness is controlled by a wet film gauge. The feed pump pressure and the consumption of components is to be checked to ensure of the correct mixing ratio.

To fill the pores in concrete surfaces, a coat of 200 - 300 µm is first sprayed and smoothed by brush or rubber spatula over porous areas. Immediately thereafter another coat is applied to achieve the total coat thickness of 500 µm.

Directions given by the manufacturer of the twin-feed spray are to be followed when working.

WARNING! The amount and the temperature of the mixture will affect the pot life. The spray equipment will be damaged if the paint is let to cure inside it.

If the interval between the coats is 1 - 2 days, good adhesion can be ensured by wiping the surface with thinner TEKNOSOLV 6560 or TEKNOSOLV 9514, which softens the paint film and makes it sticky. Whenever the maximal overcoating interval is exceeded, the adhesion can be secured by rubbing down the surface.

Application conditions

The surface to be treated must be dry. During the application and drying period the temperature of the ambient air, the surface and the product shall be above +10 °C and the relative air humidity below 80%.

Additionally, the temperature of the surface to be treated and the product must be at least +3 °C above the dew point of the ambient air.

Drying time	+23 °C / 50% RH (dry film 250 µm)		
- dust free	3 h (ISO 9117-3:2010)		
- touch dry	4 h (ISO 9117-5:2012)		
- fully cured	7 d		
Overcoatable	surface temperature	by itself	
		min.	max.*
	+10 °C	6 h	2 d
	+23 °C	3 h	24 h

* Maximum overcoating interval without roughening.

Increase in film thickness and rise in the relative humidity of the air in the drying space usually slow down the drying process.

Cleaning

TEKNOSOLV 9530

The painting equipment must be cleaned immediately after use. The hose and gun must also be rinsed with paint's own thinner during the work after every 20 - 30 liters batch.

HEALTH AND SAFETY

Safety and precaution measures

See safety data sheet.

ADDITIONAL INFORMATION

Maintenance instructions

INERTA 280 can be thinned max. 5% with TEKNOSOLV 6560 or TEKNOSOLV 9514 for painting small areas and for touching up or repainting. The paint is to be applied with an efficient airless spray or with a brush. Immediately before use the components are mixed in correct mixing ratio. The mixture is stirred thoroughly with a drilling machine. Before spraying the mixture is circulated through the hoses back to the mixing vessel until the mixture is warm.

**0809**

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Declaration of Performance No. 0056

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EN 1504-2:2004

Surface protection products – Coating	
Physical resistance (5.1)	
Chemical resistance (6.1)	
Abrasion resistance	Requirement: Weight loss less than 3000 mg
Capillary absorption and permeability to water	Requirement: $w < 0,1 \text{ kg/m}^2 \times \sqrt{h}$
Resistance to severe chemical attack, Class II	Requirement: Reduction in hardness of less than 50 %
Impact resistance	Class I: $> 4 \text{ Nm}$
Adhesion strength by pull-off test	Requirement: Rigid system with trafficking: $\geq 2,0 (1,5) \text{ N/mm}^2$
Dangerous substances	See safety data sheet

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