INERTA 165

Epoxy coating

INERTA 165 is a two-pack epoxy coating with low solvent content and based on liquid epoxy resin.

Used on steel in Epoxy coating system. Also suitable on concrete. Also used on objects immersed in water, e.g. sluice gates and pipelines of hydropower plants.

INERTA 165 has good adhesion to blast-cleaned steel and excellent abrasion resistance due to smooth and hard surface of the cured film. It is therefore suitable for use on structures that are to be subjected to heavy abrasion. INERTA 165 can be applied by airless spray, either one-component or hot twin-feed spray.

Also INERTA 165-02 HARDENER can be used in the product. Compared to the standard hardener INERTA 165 HARDENER it enables to shorten the curing time and to extend the pot life. In addition the spraying properties of the paint get better, it is possible to paint thicker films without sagging and the drying temperature can be +5 °C.

TECHNICAL DATA

Fields of application	Concrete constructions, Steel constructions
Recommended substrate	Steel, Concrete
Binder	Epoxy
Solids	INERTA 165 HARDENER 92 ±2% by volume INERTA 165-02 HARDENER 94 ±2% by volume
Total mass of solids	INERTA 165 HARDENER approx. 1300 g/l INERTA 165-02 HARDENER approx. 1360 g/l
Volatile organic compound (VOC)	INERTA 165 HARDENER approx. 100 g/l INERTA 165-02 HARDENER approx. 70 g/l 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	<table><tr><th>Dry film (µm)</th><th>Wet film (µm)</th><th>Theoretical spreading rate (m^2/l)</th></tr><tr><td>200</td><td>215</td><td>4.6</td></tr><tr><td>250</td><td>270</td><td>3.7</td></tr><tr><td>300</td><td>320</td><td>3.1</td></tr><tr><td>400*</td><td>425*</td><td>2.4*</td></tr></table>* only when using INERTA 165-02 HARDENER. 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	White (TM 101) and black (TM 102). Other colours with some restrictions.
Gloss (60°)	Gloss
Hardener	Comp. B: INERTA 165 HARDENER or INERTA 165-02 HARDENER
Mixing ratio (A:B)	2:1 parts by volume
Pot life	INERTA 165 HARDENER 30 min INERTA 165-02 HARDENER 60 min
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	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: 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). Severely pitted steel can be stopped up with INERTA 160 FILL, which is applied by twin-feed airless spray and smoothed immediately with a steel trowel (width 20 - 30 cm). Alternatively, TEKNOPOX FILL can be used. It is applied by steel trowel. 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. Big cavities in the concrete are repaired with cement mortar immediately after the removal of moulds. Before the product is applied, all holes are to be filled, and if necessary, the whole surface is stopped up with TEKNOPOX FILL. 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. The place and time of the preparation are to be chosen so that the prepared 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. Apply with airless spray with great pressure ratio. Use either one-component airless spray or hot twin-feed spray. Suitable nozzle size (turn-nozzle) 0.019 - 0.026". Take the pot life of the paint into consideration while painting. 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. 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.
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%. When using INERTA 165-02 HARDENER: The surface to be treated must be dry and the relative air humidity below 80%. During the application and drying period the temperature of the ambient air and the surface shall be at least above +5°C, and the temperature of the product above +15°C during mixing and spraying. 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	INERTA 165 HARDENER / INERTA 165-02 HARDENER 6 h / 4 h (ISO 9117-3:2010)
- touch dry	INERTA 165 HARDENER / INERTA 165-02 HARDENER 12 h / 7 h (ISO 9117-5:2012)
- fully cured	7 d

Overcoatable

surface temperature	by itself, using INERTA 165 HARDENER		by itself, using INERTA 165-02 HARDENER	
	min.	max. *	min.	max. *
+5 °C	-	-	24 h	3 d
+10 °C	10 h	2 d	9 h	2 d
+23 °C	6 h	24 h	5 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 9506 or TEKNOSOLV 9514.

HEALTH AND SAFETY

Safety and precaution measures	See safety data sheet.

ADDITIONAL INFORMATION

Maintenance instructions	Brush or roller can be used for touching up.

Teknos Group Oy Takkatie 3, P.O.Box 107 FI-00371 Helsinki, Finland Tel. +358 9 506 091

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