INERTA 280 A
–EPOXY SYSTEM FOR CONCRETE

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Intended to be used in nuclear power stations as a protective coating system for concrete surfaces. The system consists of chemically curing almost solvent-free epoxy coating. The system comes up to the specifications of STUK-YTO-TR 210 (Research Report VTT-CR-01508-20 by the Technical Research Centre of Finland).

INERTA 280 A Epoxy Paint	1 x 500 µm
Total film thickness	500 µm
Paint system VOC, g/m²	54

USAGE

For concrete surfaces in nuclear power stations in controlled indoor areas which require very good chemical resistance, such as safety basins.

Surface preparation

Remove from the surfaces any contaminants that might be detrimental to surface preparation and painting. Remove also water-soluble salts by using appropriate methods. The surfaces are prepared according to the different materials as follows:

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 grinding or blast-cleaning.

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.

For more detailed information about the above-mentioned products please see individual product data sheets.

Application

Stir the components until they are homogeneous before use. Mix base and hardener with each other in the proportions given on the paint labels and stir the mixture thoroughly. Take into consideration the pot life of the mixture when estimating the amount to be mixed.

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, with turn-nozzle 0.018 – 0.026".

PTO

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 ration of the dosage pump must be 2 : 1. The heating of the components shall be adjusted so that the temperature on 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. Check the feed pump consumption of the components to ensure the correct mixing ratio.

BY AIRLESS SPRAY: INERTA 280 A 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. 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.

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.

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.

The technical data of the paint are given in the table below and in the product data sheet.

Maintenance Repair, maintenance and renewal painting is done according to separate instructions given for the nuclear power plant, observing valid local orders issued by the authorities.

Technical Data

Paint		INERTA 280 A	
Data Sheet	No.	2236	
Paint Type		almost solvent-free two-pack epoxy coating	
Colours		by agreement	
Finish		gloss	
Thinner		TEKNOSOLV 6560 or TEKNOSOLV 9514	
Methods of application		airless spray	
Airless spray nozzle		0.018 – 0.026”	
Application conditions - min. temperature - max. relative humidity	 °C %	 +10 80	
Safety markings		See Safety Data Sheet	
Volume solids	%	96 ±2	
Total mass of solids	g/l	abt. 1500	
Volatile organic compound (VOC)	g/l	abt. 50	
Recommended film thickness - wet - dry	 µm µm	 520 500	
Theoretical spreading rate	m²/l	1.9	
Drying time, +23°C / 50 % RH - dust free (ISO 9117-3:2010) - touch dry (ISO 9117-5:2012)		(dry film 250 µm) after 3 h after 4 h	
Overcoatable, 50% RH		by itself:	
		min.	max.*
+10°C		after 6 h	after 2 d
+23°C		after 3 h	after 24 h

*Maximum overcoating interval without roughening.