INERTA 50 A –EPOXY SYSTEM

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Intended to be used in nuclear power stations as a protective coating system for steel surfaces. The system consists of chemically curing, solvent-borne two pack epoxy paints. Gloss INERTA 50 A Epoxy Top Coat is used as the top coat. The system comes up to the specifications of STUK-YTO-TR 210 (Research Report 1481/28/05/RTE by the Technical Research Centre of Finland).

ISO 12944-5:2007 symbol / corrosivity category / durability range	**A3.09/C3/H**
The coating system structure:	EP200/3-FeSa 2½
INERTA PRIMER 5 A Epoxy Primer	1 x 80 µm
INERTA 51 A Epoxy Paint	1 x 80 µm
INERTA 50 A Epoxy Top Coat	1 x 40 µm
Total film thickness	200 µm
Paint system VOC, g/m²	180

Marking of the coating system: ISO 12944-5/A3.09(EP200/3-FeSa2½).

USAGE

For protection of steel surfaces in nuclear power stations in controlled indoor areas that are exposed to radiation and decontamination in corrosivity category C3 with durability class High.

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:

Steel Surfaces: Remove mill scale and rust by blast cleaning to preparation grade Sa 2½ (standard ISO 8501-1). Roughening the surface of thin-plate improves the adhesion of the paint to the substrate.

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.

PTO

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.

Apply the paints preferably by airless spray, since only this method provides the recommended film thickness in a single operation. The temperature of the air and the surface as well as the relative air humidity during the application and drying period must conform to the figures given in the table. Higher temperatures speed up the drying process. The surface must be dry and free from dust.

The technical data of the paints are given in the table below and in the product data sheets.

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 PRIMER 5 A		INERTA 51 A		INERTA 50 A	
Data Sheet	No.	1193		1194		1195	
Paint Type		two-pack epoxy primer		two-pack epoxy paint		two-pack epoxy top coat	
Colours		red, yellow, grey and white		white, grey		by agreement	
Finish		matt		semi-matt		gloss	
Thinner		TEKNOSOLV 9506		TEKNOSOLV 9506		TEKNOSOLV 9506	
Methods of application		airless spray		airless spray		airless spray, brush	
Airless spray nozzle		0.013 - 0.018"		0.017 - 0.021"		0.011 - 0.015"	
Application conditions - min. temperature - max. relative humidity	 °C %	 +10 80		 +10 80		 +10 80	
Safety markings		See Safety Data Sheet		See Safety Data Sheet		See Safety Data Sheet	
Volume solids	%	55 ±2		50 ±2		48 ±2	
Total mass of solids	g/l	abt. 1000		abt. 970		abt. 700	
Volatile organic compound (VOC)	g/l	abt. 430		abt. 440		abt. 480	
Recommended film thickness - wet - dry	 µm µm	 145 80		 160 80		 83 40	
Theoretical spreading rate	m²/l	6.9		6.3		12.0	
Drying time, +23°C / 50 % RH - dust free (ISO 9117-3:2010) - touch dry (ISO 9117-5:2012)		(dry film 60 µm) after 1 h after 3 h		(dry film 50 µm) after 1 h after 5 h		(dry film 40 µm) after 1 h after 6 h	
Overcoatable, 50% RH		by itself, with INERTA 51 A or INERTA 50 A:		by itself or with INERTA 50 A:		by itself:	
		min.	max*	min.	max*	min.	max*
+10°C		after 12 h	after 6 months	after 12 h	after 6 months	after 24 h	after 3 months
+23°C		after 4 h	after 6 months	after 4 h	after 6 months	after 12 h	after 3 months

* Maximum overcoating interval without roughening.