

TEKNOZINC SS 1K A -ZINC SILICATE SYSTEM

1 25.02.2021

Intended to be used in nuclear power stations as a protective coating system for steel surfaces. The system consists of one-pack zinc rich ethyl silicate paint. As for the radiation resistance the system comes up to the specifications of STUK-YTO-TR 210 (Research Report VTT-CR-01515-20 by the Technical Research Centre of Finland).

The coating system structure:	ESIZn(R)80/1- FeSa 2½
TEKNOZINC SS 1K A Zinc Silicate Paint	1 x 80 µm
Paint system VOC, g/m ²	60

USAGE

For cathodic protection of steel surfaces in nuclear power stations in controlled indoor areas that are exposed to radiation. The paint has excellent resistance to mechanical abrasion and it withstands dry heat up to +400°C.

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). The profile of the blast-cleaned surface must be at least coarse (reference comparator "G"). See standard ISO 8503-2 (G).

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 The paint is applied by airless spray, by conventional spray equipped with a mixer, or by brush. Airless spray nozzle 0.015 - 0.021", angle of nozzle according to the workpiece to be coated, turn-nozzle is recommended.

The paint must be frequently stirred in the course of work in order to avoid sedimentation of the zinc dust. As the specific gravity of the paint is high, it is necessary that when conventional spray is used, the fluid level in the paint vessel is over the gun or at least at equal height with it. Note! Dry film thicknesses exceeding 100 µm are to avoided because of the risk of cracking. Brush application easily fails to provide the recommended film thickness.

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	TEKNOZINC SS 1K A		
Data Sheet	No.	2458	
Paint Type	one-pack zinc silicate paint		
Colours	grey		
Finish	matt		
Thinner	TEKNOSOLV 1639		
Methods of application	airless spray, conventional spray, brush		
Airless spray nozzle	0.015 – 0.021"		
Application conditions			
- min. temperature	°C	+5	
- max. relative humidity	%	50 - 90	
Safety markings	See Safety Data Sheet		
Volume solids	%	60 ±2	
Total mass of solids	g/l	abt. 2080	
Volatile organic compound (VOC)	g/l	abt. 450	
Recommended film thickness			
- wet	µm	133	
- dry	µm	80	
Theoretical spreading rate	m ² /l	7.5	
Drying time, +23°C / 50 % RH	(dry film 60 µm)		
- dust free (ISO 9117-3:2010)	after 15 min		
- touch dry (ISO 9117-5:2012)	after 30 min		
Overcoatable	by itself*:		
	min.	max.	
RH 90 % or wetting of surfaces	+5°C	after 7 d	-
RH over 80 % or wetting of surfaces	+23°C	after 6 h	-

* Only for minor repair objects.