

# TEKNOFLOOR AQUA 110F A –EPOXY SYSTEM

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Intended to be used in nuclear power stations as a protective coating system for concrete floors. The system consists of chemically curing water-borne two-pack epoxy paint. The system comes up to the specifications of STUK-YTO-TR 210 (Research Report VTT-CR-01512-20 by the Technical Research Centre of Finland).

The coating system structure:	EP180/3
TEKNOFLOOR AQUA 110F A Concrete Paint	3 x 60 µm
Total film thickness	180 µm

## USAGE

For protection of concrete surfaces in nuclear power stations in controlled indoor areas that are exposed to radiation and decontamination in spaces subjected to minor mechanical wear.

## Surface preparation

**New concrete floor:** New concrete must be at least 4 weeks old and well-hardened so that all moisture from casting is bound and the surface dry. The moisture of the concrete must not exceed 97 % as relative humidity or 4% by weight (by 54 / BLY 12).

Surface grinding is the best method to remove laitance. It is always recommended for industrial floors and it is done on new industrial floors as wet grinding in connection with casting. Brittle and powdery top layers are ground so that the solid concrete containing aggregates is exposed. Remove all cement dust by vacuum cleaning or brushing.

**Old concrete floor:** Uncoated, greasy floors can be cleaned by emulsion wash. After the emulsion wash flaking old paint coats and possible laitance is removed by diamond grinding.

## Application

Mixing of the paint: Mix 1 part Base to 1 part Hardener by volume immediately before use and stir thoroughly. Stir the Base before mixing so that it is homogenous. If the quantity of the mixture is more than 1 liter, use a slow-rotating hand drilling machine. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired film properties. Ready paint is to be used within 1½ h from mixing. After this the mixture is unfit for use.

Apply two coats to new concrete floors. Dilute the paint for priming by adding 5 - 10% water. The paint is diluted by water, which is added to the ready paint mixture. Apply the paint generously so that the porous concrete surface is sealed. Solvents must not be used for diluting!

Apply by brush, short-piled mohair roller or airless spray. Use airless spray nozzles 0.015 - 0.018". Clean all equipment immediately after use with water and detergent.

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

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**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	TEKNOFLOOR AQUA 110F A	
Data Sheet No.	1254	
Paint Type	two-pack water-borne epoxy paint	
Colours	by agreement	
Finish	gloss	
Thinner	water	
Methods of application	brush, roller, airless spray	
Airless spray nozzle	0.015 – 0.018"	
Application conditions		
- min. temperature	°C	+10
- max. relative humidity	%	70
Safety markings	See Safety Data Sheet	
Volume solids	%	45 ±2
Total mass of solids	g/l	abt. 650
Volatile organic compound (VOC)	g/l	20
Recommended film thickness		
- wet	µm	133
- dry	µm	60
Theoretical spreading rate	m <sup>2</sup> /l	7.5
Drying time, +23°C / 50 % RH	(dry film 60 µm)	
- dust free (ISO 9117-3:2010)	after 1 h	
- fit for light traffic	after 4 h	
Overcoatable, 50% RH	by itself:	
	min.	max.*
<b>+10°C</b>	after 12 h	after 7 d
<b>+23°C</b>	after 4 h	after 7 d

\* Maximum overcoating interval without roughening.