

# TEKNOFLOOR 5620 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 solvent-free two-pack epoxy products. The system comes up to the specifications of STUK-YTO-TR 210 (Research Report VTT-CR-01513-20 by the Technical Research Centre of Finland).

The coating system structure:	EP2000
TEKNOFLOOR PRIMER 5750 A	priming
TEKNOFLOOR 5620 A	2 mm
Total film thickness	2 mm

## 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 heavy 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).

Dense laitance is to be removed from steel-trowelled concrete by shot-blasting or surface grinding. Brittle and powdery top layers are treated so that the solid concrete containing aggregate is exposed. Thereafter all cement dust is removed by vacuum cleaner or brush. The concrete surface must be clean of anything that might hinder the adhesion.

**Old concrete floor:** Uncoated, greasy floors are cleaned by emulsion wash. Thereafter laitance is removed by shot-blasting, scarifying or surface grinding. Scarifying and shot-blasting are the best methods for removal of disrepair concrete or old flaking paint or composition layers.

## Priming varnishing

The priming is done with TEKNOFLOOR PRIMER 5750 A Epoxy Varnish. For roller application the varnish is diluted about 20 - 30% with TEKNOSOLV 9515 or TEKNOSOLV 9506. If the concrete floor is very porous, a second coat can be applied with TEKNOFLOOR PRIMER 5750 A Epoxy Varnish according to the instructions for overcoating time given in the Data Sheet.

## Mixing of the components and coating

The base and hardener are mixed together in right proportion thoroughly down to the bottom of the vessel for 2 minutes. It is recommended to use a slow-rotating drilling machine equipped with a stirrer for mixing. Careless stirring or incorrect mixing ratio will cause an irregular curing and impaired film properties.

While the mixer is rotating add slowly quartz sand or natural sand into the mixture in proportion according to the table in the Data Sheet. Carry on mixing until the composition is homogeneous.

Spread the composition with an adjustable trowel, the slit of which can be adjusted to correspond to 2 mm coat thickness. Use a plastic porcupine roller to delete air bubbles.

It is recommended that paint of the same batch is used for painting large uniform floors. If paint from different batches must be used, the application is to be planned so that the seams between batches are done to natural lines, i.e. sills and expansion joints.

Clean all equipment immediately after use with TEKNOSOLV 9506.

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	TEKNOFLOOR PRIMER 5750 A		TEKNOFLOOR 5620 A	
Data Sheet No.	2424		2421	
Paint Type	two-pack solvent-free epoxy varnish		two-pack solvent-free epoxy coating	
Colours	varnish		by agreement	
Finish	full gloss		full gloss	
Thinner	TEKNOSOLV 9506 or 9515		clean up: TEKNOSOLV 9506	
Methods of application	brush, roller, airless spray		adjustable trowel, porcupine roller	
Application conditions				
- min. temperature °C	+10		+10	
- max. relative humidity %	80		80	
Safety markings	See Safety Data Sheet		See Safety Data Sheet	
Volume solids %	100		100	
Total mass of solids g/l	abt. 1100		abt. 1400	
Volatile organic compound (VOC) g/l	abt. 0		abt. 0	
Spreading rate m <sup>2</sup> /l	3 - 6		0.5	
Drying time, +23°C / 50 % RH - touch dry (ISO 9117-5:2012) - fit for light traffic	(dry film 60 µm) after 8 h after 16 h		after 6 h after 16 h	
Overcoatable, 50% RH	by itself or with TEKNOFLOOR 5620 A:		by itself:	
	min.	max.*	min.	max.*
<b>+10°C</b>	after 18 h	after 48 h	after 24 h	after 48 h
<b>+23°C</b>	after 8 h	after 24 h	after 12 h	after 24 h

\*Maximum overcoating interval without roughening.