TEKNOFLOOR 500F

Epoxy coating

TEKNOFLOOR 500F is a solvent-free two-pack epoxy coating for concrete floors. The product can be used on the floors of food production spaces (Smithers Rapra, Certificate Number GC0070).

Used on all industrial floors where a level, conformal coating with a good mechanical resistance is required.

The coating withstands water, chemicals, oil, grease and petrol. It does not resist strong acids nor continuous attacks by organic acids or strong solvents. The abrasion resistance of the coating is very good. When good colour and gloss retention is required TEKNOFLOOR 500F can be overcoated with polyurethane top coats of the TEKNODUR 0100 series. The coating becomes level by itself on even surfaces.

Properties of a 2 mm mass:
- Compression strength: 74 MPa (ISO 604: 2002)
- Water permeability: waterproof (SFS-EN 13553)
- Fire resistance class: B_{fl}-s1 (EN 13501-1: 2002)

TECHNICAL DATA

Certificates, approvals and classification	CE marking, M1 classification, Smithers Rapra
Recommended substrate	Concrete
Binder	Epoxy
Solids	Approx. 100% by volume
Total mass of solids	Approx. 1200 g/l
Volatile organic compound (VOC)	Approx. 0 g/l (DIRECTIVE 2010/75/EU) The VOC value provided is the average value for factory produced products, and consequently it will be subject to variations between individual products covered by this Technical Data Sheet.
Practical spreading rate	Coating: 0.3 - 0.5 l mixture/m² depending on film thickness. Composition: 2 l ready composition/m² depending on the film thickness.
Film thickness	Coating: 0.3 - 0.5 mm Composition: 2 mm
Colours	Base 1 and base 3 (white and opaque colours). Also certain colours of the RAL Colour Card by factory delivery. NOTE! Sunlight will change the colour and glossiness of the coating in the course of time.
Tinting system	Teknomix

Gloss (60°)	Full gloss
Hardener	Comp. B: TEKNOFLOOR HARDENER 500H
Mixing ratio (A:B)	

The coating thickness	300 - 500 µm	2 mm
Base (Comp. A):	9 l	9 l
Hardener (Comp. B): TEKNOFLOOR HARDENER 500H	2.7 l	2.7 l
Quartz sand or natural sand, grain size 0.1 - 0.6 mm	-	12 l
Ready mixture	11.7 liters	approx. 18 liters

Pot life	30 - 60 min (mixture poured out on the floor) 10 - 15 min (mixture kept in the vessel)
Thinner	Not to be diluted.
Storage	The storage stability is shown on the label. Must be stored tightly closed and kept cool.

DIRECTION FOR USE

Surface preparation	NEW CONCRETE SURFACES: The 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 SURFACES: Uncoated, greasy floors are cleaned by emulsion wash. Thereafter laitance is removed by shot-blasting, scarifying, surface grinding or etching. Scarifying and shot-blasting are the best methods for removal of disrepair concrete or old flaking paint or composition layers. The surface preparation method for both new and old concrete is chosen according to condition of the concrete and strain the floor will be exposed to. The best method for floors to be attacked by heavy abrasion, chemicals or hot water is scarifying or shot-blasting. Surface grinding is enough if the floor will be subjected to minor abrasion only. In general, surface preparation by etching is not recommended for composition floors within industry. Etching is mainly used for small areas when mechanical preparation methods are not applicable. Etching is to be done with RENSA ETCHING etching liquid. Rinse the floor with water after etching and allow to dry. All special jobs should be done before the application of the actual priming. E.g. cutting grooves at joints between steel and concrete. Cutting working and expansion joints open. Fitting up skirting and rounding of corners. Filling cavities and cervices, and possible levelling down the floor. Filling can be done with TEKNOPOX FILL or with stiff putty prepared by adding an adequate amount of dry sand (e.g. 0.1 - 0.6 mm) to undiluted varnish.
Priming	The priming is done with TEKNOFLOOR PRIMER 310F epoxy varnish. For mohair roller application the varnish is diluted about 30% with TEKNOSOLV 9515 or TEKNOSOLV 9506. Spread the varnish 0.2 - 0.3 l/m². If the concrete floor is very porous, the second coat can be applied with TEKNOFLOOR PRIMER 310F epoxy varnish according to the instructions for overcoating time given in the Data Sheet. TEKNOFLOOR PRIMER 306F epoxy arnish can be used on fresh, 2 - 27 days old concrete surface according to the instructions given in the Data Sheet.

Application method	Roller, Trowel
Application	MIXING OF THE COMPONENTS: Before application the base and hardener are mixed in right proportion. Stir thoroughly down to the bottom of the vessel. Mixing by machine is recommended, for example a slow-rotating hand-drill equipped with a mixer. Inadequate stirring or incorrect mixing ratio results in imperfect curing and impaired film properties. The application is done within 6 - 24 hours of priming depending on the temperature. The recommended coat thickness is achieved by a suitable indentation of the steel trowel. Smooth down with a short-haired mohair roller. Applying films above 1.0 mm, while the mixer is rotating add slowly quartz sand or natural sand (see table) into the mixture. Carry on mixing until the component is homogeneous. Spread the composition with an adjustable trowel, the slit of which can be adjusted to give the coat thickness required. Smooth the coat with a mohair roller and 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.
Application conditions	The surface to be treated must be dry. During the application and drying period the temperature of the ambient air, the surface and the product shall be above +10 °C and the relative air humidity below 80%. Additionally, the temperature of the surface to be treated and the product must be at least +3 °C above the dew point of the ambient air.
Drying time	+23 °C / 50% RH
- dust free	6 h (ISO 9117-3:2010)
- touch dry	16 h (ISO 9117-5:2012)
- fully cured	7 d
Overcoatable	

surface temperature	**by itself**	
	min.	max. *
+10 °C	24 h	2 d
+23 °C	16 h	1 d

* Maximum overcoating interval without roughening.

Cleaning	TEKNOSOLV 9506. Wash the equipment immediately after use.

HEALTH AND SAFETY

Safety and precaution measures	See safety data sheet.

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0809-CPR-1063 EN 1504-2:2004	
Surface protection products – Coating	
Physical resistance (5.1)	
Chemical resistance (6.1)	
Abrasion resistance	Requirement: Weight loss less than 3000 mg
Capillary absorption and permeability to water	Requirement: w < 0,1 kg/m^2 x √h
Resistance to severe chemical attack	Requirement: Reduction in hardness of less than 50 %
Impact resistance	Class I: > 4 Nm
Adhesion strength by pull-off test	Requirement: Rigid system with trafficking: ≥ 2,0 (1,5) N/mm^2
Reaction to fire	B_{fl} - s1
Dangerous substances	See safety data sheet

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