DATA SHEET 2120
6 27.12.2021

TEKNOPUR 340 FR

fire-retardant elastomeric coating

PAINT TYPE

TEKNOPUR 340 FR is a two-pack, solvent-free elastomeric coating. Coating is applied by spraying. TEKNOPUR 340 FR is based on pure polyurea.

USAGE

Used as waterproofing and improving of physical resistance for roofs and concrete structures on objects which require a fire resistance rated coating.

SPECIAL PROPERTIES

TEKNOPUR 340 FR withstands impacts and constant immersion in water. It will cure also in -20°C temperature. The coating is fire-proofed with effective, halogen-free fire retardants. The coating fulfills the Nordic requirements of external fire exposure to roofs according to CEN TS 1187 Test 2 on certain flammable substrates and on all non-flammable substrates. Fire resistance class Cfl-s1 for floorings.
The coating is usually applied to 2 - 5 mm thickness.

APPROVALS

Product has CE approval for protection of concrete structures. Additional information: see page 3: "CE MARKING".

TECHNICAL DATA

Mixing ratio

Base (Comp. B):	1 part by volume
Hardener (Comp. A): TEKNOPUR 340 FR HARDENER	1 part by volume

Gel time

abt. 5 sec

Solids

abt. 100 % by volume

Total mass of solids

abt. 1190 g/l

Volatile organic compound (VOC)

abt. 0 g/l

Recommended film thickness and theoretical spreading rate

Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m²/l)
2000	2000	0,5
3000	3000	0,3
5000	5000	0,2

Practical spreading rate

The values depend on the application technique, surface conditions, overspray, etc.

Drying time at +23°C / 50% RH

- tack-free	after about 15 sec
- may be walked on	after about 40 sec
- fully cured	after about 1 d

Overcoatable

	by itself	
surface temperature	min.	max.
+10°C	after 2 min	after 24 h
+23°C	-	after 24 h

Clean up

TEKNOCLEAN 6496, TEKNOCLEAN 6481

Finish

Gloss

Colours

Black and Tile Red. Other colours by agreement.

SAFETY MARKINGS

See Safety Data Sheet.

PTO

DIRECTION FOR USE

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 (ISO 8501-1).
The profile of the blast-cleaned surface must be at least coarse (reference comparator "G"). See standard ISO 8503-2 (G).

BITUMEN SURFACES: Remove from the surfaces any contaminants (e.g. grease and salts) that might be detrimental to painting. Surfaces to be painted must be dry and clean. Damaged parts are pretreated in accordance with the requirements placed by the substrate and the maintenance painting.

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 nor exceed 97 % as relative humidity or 4% by weight (by 45 / BLY 7).
Dense laitance is to be removed from the concrete by shot-blasting, sanding or by sand blasting. 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 PAINTED SURFACES SUITABLE FOR OVERCOATING: Any impurities that might be detrimental to the application of paint (e.g. grease and salts) are removed. The surfaces must be dry and clean. Old, painted surfaces that have exceeded the maximum overcoating time are to be roughened as well. Damaged parts are prepared in accordance with the requirements of the substrate and the maintenance coating.

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.

More detailed instructions available in separate system descriptions.

Application conditions

The surface to be painted has to be dry. During the application and drying period the temperature of the ambient air and the surface shall be above -10°C and the relative air humidity below 90%. The temperature of the surface to be painted must be at least +3°C above the dew point of the ambient air.

Application

Vertical surfaces:
On vertical surfaces the required thickness of paint layer is builded by spraying several bonded layers, in which case the coating underneath has time to harden to drip-free.
Paint is applied by hot twin-feed spray, e.g. Graco Reactor or PMC PHX-2. The components are mixed in the pistol (e.g. Graco Fusion AP or PMC AP-2). The mixing chamber and nozzle are chosen according to the object to be painted. Recommended spraying pressure is 150-160 bar.

For two component application the components must be kept at a temperature of +20 - +25° C before use so that they are fluid enough for the feed pumps. To ensure that the paint is uniform the base needs to be stirred thoroughly before use and, if needed, also during application. Recommended filter size for base part is 60 mesh.
The ratio of the dosage pump must be 1 : 1. The heating shall be adjusted so that the temperature of the components is +75 - +80°C. The houses are heated to the same temperature. Temperature of the mixture in the nozzle must be at least +75 °C.

The film thickness is controlled from reference plate by dry film gauge. The mixing ratio is ensured by controlling the pressure on the feed pumps and consumption of the components and also by measuring the hardness of the coating (Shore A).
Directions given by the manufacturer of the twin-feed spray are to be followed when working.

Bitumen surfaces:
Priming varnishing is done with TEKNOPUR SEALER 100 moisture-curing polyurethane varnish.

Concrete surfaces:
The priming is done with TEKNOFLOOR PRIMER 310F or TEKNOFLOOR PRIMER 306F epoxy varnishes according to the instructions given in the Data Sheet. The priming is also possible to be done with TEKNOPUR SEALER 100 moisture-curing polyurethane varnish.

Steel surfaces:
As a primer can be used TEKNOZINC 3233 moisture-curing polyurethane paint or TEKNOPUR SEALER 100 moisture-curing polyurethane varnish.

ADDITIONAL INFORMATION

The storage stability is shown on the label. Store in a cool place and in tightly closed containers.
Hardener reacts with the air humidity. Opened can is to be carefully closed after the use and it is recommended to be used within 3 days from opening. Barrels are to be equipped with desiccant tubes.

Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.

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CE MARKING

CE	
0809	
Teknos Oy Takkatie 3, P.O. Box 107 FI-00371 Helsinki, Finland 13 Declaration of Performance No 0036	
0809-CPR-1063 EN 1504-2:2004 Surface protection products – Coating Physical resistance (5.1) Chemical resistance (6.1) Moisture control (2.2)	
Abrasion resistance	Requirement: Weight loss less than 3000 mg
Capillary absorption and permeability to water	Requirement: $w < 0.1$ kg/m^2 x $\sqrt{h}$
Resistance to severe chemical attack	Requirement: Reduction in hardness of less than 50 %
Impact resistance	Class III: ≥ 20 Nm
Adhesion strength by pull-off test	Requirement: Crack-bridging system with trafficking: ≥ 1.5 (1.0) N/mm^2
Crack bridging ability	Class A5: Width of the crack bridged > 2.5 mm, -10°C
Reaction to fire	C_{fl} – s1
Compressive strength	Class II: ≥ 50 N/mm^2 (trafficking with steel wheels)
Water vapour permeability	Class I, sd < 5 m
Dangerous substances	See safety data sheet

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