DATA SHEET 1951
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TEKNOPUR 300-800
elastomeric coating

PAINT TYPE
TEKNOPUR 300-800 is a two-pack, solvent-free elastomeric coating. Coating is applied by spraying. TEKNOPUR 300-800 is based on pure polyurea.

USAGE
Intended for use as waterproofing for bitumen roofs and concrete structures and as a coating for surfaces which require abrasion resistance e.g. transport wagons.

SPECIAL PROPERTIES
TEKNOPUR 300-800 withstands impacts, hard abrasion, chemicals and constant immersion in water. It will cure also in -20°C temperature. Coating yellows due to the impact of UV-light. When a surface with good colour retention is desired, the surface needs to be overcoated with e.g. TEKNODUR polyurethane top coat. The coating is usually applied to 500 - 3000 µm thickness.

Fire resistance class E_{fl} for floorings.
For objects subjected to chemical immersion using colour Light grey is recommended.

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 HARDENER 7245	1 part by volume

Gel time
abt. 5 sec

Solids
abt. 100 % by volume

Total mass of solids
abt. 1120 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

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 12 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, Tile Red, RAL 1023, RAL 7031, Light grey and signal yellow RAL 1003. 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).
The priming is done with TEKNODUR PRIMER 8-00 polyurethane primer or TEKNOMASTIC 80 PRIMER epoxy primer according to the instructions given in the Data Sheet.

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.
The priming is done with TEKNOPUR SEALER 200-00 polyurethane varnish according to the instructions given in the Data Sheet.

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.
The priming is done with TEKNOPUR SEALER 200-00 polyurethane varnish or TEKNOFLOOR PRIMER 306F epoxy varnish according to the instructions given in the Data Sheet.

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. The base needs to be stirred thoroughly before use to ensure that the paint is uniform.
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 hoses are heated to the same temperature. Temperature of the mixture in the nozzle must be at least +70°C.

The film thickness is controlled from reference plate by dry film gauge. The maximum recommended amount to be applied in one application is 2.5 mm. Thicker films are applied in phases so that the film is left to cool down between layers.
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.

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 0035	
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 √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	E_{fl}
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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