TEKNOPUR 400-800

Elastomeric coating

TEKNOPUR 400-800 is a two-pack, solvent-free elastomeric coating.
Coating is applied by spraying.
TEKNOPUR 400-800 is based on modified polyurea technology.

Intended for use as waterproofing and as a coating for bitumen roofs and concrete structures.

TEKNOPUR 400-800 withstands impacts, hard abrasion, chemicals and constant immersion in water. The coating yellows due to the effect of UV-light. When a surface with good colour retention is desired, the surface needs to be overcoated with TEKNODUR 0050, 0090 or 0190 polyurethane top coat.
The coating is usually applied to 2000 - 3000 µm thickness.

Product has CE approval for protection of concrete structures.

TECHNICAL DATA

Certificates, approvals and classification	CE marking
Recommended substrate	Bitumen, Concrete, Geotextile, GRP (glass reinforced polyester), Plywood, Steel, Wood
Binder	Polyurea
Solids	Approx. 100% by volume
Total mass of solids	Approx. 1130 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.
Theoretical spreading rate	

Dry film (µm)	Wet film (µm)	Theoretical spreading rate (m^2/l)
2000	2000	0.5
3000	3000	0.3

Practical spreading rate	The values depend on the application technique, surface conditions, overspray, etc.
Colours	Black, Light grey, Tile red. Other colours by agreement.
Gloss (60°)	Gloss
Hardener	Comp. A: TEKNOPUR HARDENER 7245
Mixing ratio (A:B)	1:1 parts by volume
Gel time	Approx. 15 seconds

Storage

The storage stability is shown on the label. Store indoors in a cool and dry place and in a tightly closed can.

The hardener reacts with 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.

DIRECTION FOR USE

Surface preparation	Remove from the surfaces any contaminants that might be detrimental to surface preparation and application. 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 (standard 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. GRP (Glasfiber Reinforced Plastic) COMPOSITE: Pretreat the surface using mechanical abrasive sanding P60 - P80. Remove dust. Due to varying nature of composites adhesion test is always recommended before extensive using. 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. Additional instructive information for surface preparation can be found in standards EN ISO 12944-4 and ISO 8501-2.

Priming	STEEL SURFACES: As a primer can be used TEKNODUR PRIMER 8-00 solvent-borne polyurethane paint or TEKNOMASTIC 80 PRIMER epoxy primer. The manufacturer should be contacted to check the suitability of other primers. BITUMEN SURFACES: Priming varnishing is done with TEKNOPUR SEALER 100-00 moisture-curing polyurethane varnish or with TEKNOPUR SEALER 200-00 polyurethane varnish by the instructions mentioned in the TDS. CONCRETE SURFACES: Priming varnishing is done with TEKNOPUR SEALER 100-00 moisture-curing polyurethane varnish or with TEKNOPUR SEALER 200-00 polyurethane varnish by the instructions mentioned in the TDS.
Application method	Hot twin feed-spraying Product 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.
Application	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 product is uniform the base needs to be stirred thoroughly before use. 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 1500 - 2000 µm. Thicker films are applied in phases so that the film is left to cool down between layers. 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. 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, ISO 868). Directions given by the manufacturer of the twin-feed spray are to be followed when working.

Application conditions	The surface to be treated must 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 treated must be at least +3 °C above the dew point of the ambient air.
Drying time	+23 °C / 50% RH
- touch dry	Approx. 40 sec
- fit for light traffic	Approx. 5 min
- fully cured	Approx. 1 d
Overcoatable	

surface temperature	by itself	
	min.	max.
+10 °C	4 min	24 h
+23 °C	1 min	24 h

Cleaning	TEKNOCLEAN 6496, TEKNOCLEAN 6481-00.

HEALTH AND SAFETY

Safety and precaution measures	See safety data sheet.

CE

0809
Teknos Oy, Takkatie 3, P.O. Box 107, FI-00371 Helsinki, Finland
19
Declaration of Performance No. 0040
0809-CPR-1063
EN 1504-2:2004
Surface protection products – Coating
Physical resistance (5.1)
Chemical resistance (6.1)
Moisture control (2.2)

Compressive strength	Class II: ≥ 50 N/mm^2 (trafficking with steel wheels)
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
Water vapour permeability	Class I, sd < 5 m
Dangerous substances	See safety data sheet

Teknos Group Oy Takkatie 3, P.O.Box 107 FI-00371 Helsinki, Finland Tel. +358 9 506 091