

TEKNODUR COMBI 0450 POLYURETHANE SYSTEMS

K49

8 9.2.2012

Coating systems for steel surfaces that will be exposed to atmospheric corrosion. The systems include of active pigmented two pack polyurethane reactive paint. The paint is quick drying. The system is suitable straight onto metal surfaces either one or two layer systems.

STEEL SURFACES:

Teknos Coating System Symbol	K49a	K49b	K49e
ISO 12944-5 (2007) symbol / corrosivity category / durability range	-	-	-
The coating system structure:	PUR100/1- FeSa 2½	PUR120/2- FeSa 2½	EPPUR160/2- FeSa 2½
TEKNOPLAST PRIMER 3 Epoxy Primer	-	-	1 x 60 µm
TEKNODUR COMBI 0450 Polyurethane Paint	1 x 100 µm	2 x 60 µm	1 x 100 µm
Total film thickness	100 µm	120 µm	160 µm
Coating system VOC, g/m ²	120	150	170

ZINC SURFACES:

Teknos Coating System Symbol	K49c	K49d
ISO 12944-5 (2007) symbol / corrosivity category / durability range	-	-
The coating system structure:	PUR100/1- ZnSaS	PUR120/2- ZnSaS
TEKNODUR COMBI 0450 Polyurethane Paint	1 x 100 µm	2 x 60 µm
Total film thickness	100 µm	120 µm
Coating system VOC, g/m ²	120	150

Example of the coating system's marking: K49a - PUR100/1-FeSa 2½.

USAGE

Structural metal exposed to atmospheric corrosion indoors and outdoors.

Teknos symbol	Typical use
K49a	Protection for steel structures outdoors in corrosivity category C2.
K49b	Protection for steel structures outdoors in corrosivity category C3.
K49c	Protection for hot-dip-galvanized structures outdoors in corrosivity category C2. System in accordance with standard SFS 5873 for hot-dip-galvanized surfaces in corrosivity categories C1 and C2 (system F30.01). Used on aluminium surfaces the same standard's system corresponding to F40.01 (EP100/1-AISaS).
K49d	Protection for hot-dip-galvanized structures outdoors in corrosivity category C3.
K49e	System in accordance with standard SFS 5873 for corrosivity category C3 (system S.3.17).

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 (standard ISO 8501-1). Roughening the surface of thin-plate improves the adhesion of the paint to the substrate.

Zinc surfaces: Hot-dip-galvanized steel structures that are exposed to atmospheric corrosion can be painted if the surfaces are sweep blast-cleaned (SaS) till matt all over. Suitable cleaning agents are, e.g. aluminium oxide and natural sand. It is not recommended to paint galvanized objects that are subjected to immersion strain. It is recommended that new zinc-coated thin-plate structures are treated with sweep blast-cleaning (SaS). Surfaces that have been weathered to matt can be treated also with PELTI-PESU Cleaning Agent.

Aluminium surfaces: Treat the surfaces with PELTI-PESU cleaning agent. Surfaces that are exposed to weathering are also roughened up with sweep blast-cleaning (AISaS) or sanding.

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.

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

Prefabrication Primer

The coating systems are compatible with KORRO PVB Prefabrication Primer and KORRO E Epoxy Prefabrication Primer.

Continues

Application Stir the components of the paints thoroughly before use.
Apply the paints onto surface that is dry and is free of dust to even and required film thickness.

The technical data of the paint is given in the table below and in the data sheet of the product.

Maintenance **Touch-up:** Surfaces with rust grades Ri 1 to Ri 3 can be repaired by touching up.
Rub down any surface defects and sharp edges. Remove flaking paint and feather the edges of prepared areas. When blast-cleaning is used, care should be taken to avoid formation of cracks in the remaining paint film. If the repair includes painting the whole surface with top coat, matt down glossy old paint coats and remove all dust and grindings. Touch up the prepared patches with the primer and the top coat of the system to the original film thickness.

Complete renewal: When the surface rust grade is Ri 4 the maintenance painting is done as a renewal painting. Blast-clean the whole surface to grade Sa 2½ and renew the paint from start.

Technical Data

Paint		TEKNOPLAST PRIMER 3	TEKNODUR COMBI 0450		
Data Sheet	No.	442	934		
Paint Type		epoxy primer	polyurethane paint		
Colours		grey, red, yellow and white	Teknomix tinting		
Finish		semi-matt	0450-05: semigloss 0450-02: semimatt		
Thinner		TEKNOSOLV 9506	TEKNOSOLV 9521 or TEKNOSOLV 6220		
Methods of application		airless spray	airless spray		
Airless spray nozzle		0,013 - 0,019"	0.011 - 0.013"		
Application conditions					
- min. temperature	°C	+10	+5		
- max. relative humidity	%	80	80		
Safety markings		See Material Safety Sheet	See Material Safety Sheet		
Volume solids	%	53 ±2	43 ±2		
Total mass of solids	g/l	abt. 910	0450-05: abt. 630 0450-02: abt. 700		
Volatile organic compound (VOC)	g/l	abt. 440	abt. 530		
Recommended film thickness					
- wet	µm	113	139 - 232		
- dry	µm	60	60 - 100		
Theoretical spreading rate	m ² /l	8.8	7.2 - 4.3		
Drying time at +23°C / 50% RH		(dry film 60 µm)	(dry film 40 µm)		
- dust free, (ISO 9117-3:2010)		after 1 h	after 30 min		
- touch dry, (DIN 53150:1995)		after 4 h	after 5 h		
Overcoatable, 50% RH		by itself or with TEKNOPLAST 50:	by itself:		
		min.	max.	min.	max.
	+5°C	-	-	after 20 h	-
	+10°C	after 6 h	after 6 months	-	-
	+23°C	after 2 h	after 6 months	after 12 h	-