TEKNOPLAST 50 / 90 EPOXY SYSTEMS

K43

	L	M	H
C2	O	O	O
C3	O	O	
C4			
C5	O		

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Coating systems for anti-corrosive painting on steel surfaces. The systems consist of chemically curing, solvent-borne two-pack epoxy reactive paints. For the primer is used TEKNOZINC 90 SE Zinc Rich Epoxy Paint, that contains zinc and protects like zinc cathodically. Semigloss TEKNOPLAST 50 or gloss TEKNOPLAST 90 can be used for the top coat.

Teknos Coating System Symbol	**K43a**	**K43b**	**K43c**	**K43d**	**K43e**
EN ISO 12944-5 (2007) symbol / corrosivity category / durability range	**A3.11/C3/H A4.13/C4/L**	**A4.14/C4/M**	**A4.15/C4/H A5I.04/C5-I/M A5M.05/C5-M/M**	**-**	**A5I.05/C5-I/H A5M.06/C5-M/H**
EN ISO 12944-5 (1998) symbol / corrosivity category / durability range	S3.21/C3/H S4.19/C4/L S6.05/C5-I/M	S3.22/C3/H S4.20/C4/M	S4.21//C4/H S6.06/C5-I/H S7.07/C5-M/M	S4.22/C4/H	S4.23/C4/H S7.09/C5-M/H
The coating system structure:	EPZn(R)EP160/3-FeSa 2½	EPZn(R)EP200/3-FeSa 2½	EPZn(R)EP240/4-FeSa 2½	EPZn(R)EP280/4-FeSa 2½	EPZn(R)EP320/4-FeSa 2½
TEKNOZINC 90 SE Zinc Rich Epoxy Paint	1 x 40 µm	1 x 40 µm	1 x 40 µm	1 x 40 µm	1 x 40 µm
TEKNOPLAST PRIMER 5 Epoxy Primer	1 x 60 µm	1 x 80 µm	2 x 70 µm	2 x 80 µm	2 x 100 µm
TEKNOPLAST 50 or TEKNOPLAST 90 Epoxy Top Coat	1 x 60 µm	1 x 80 µm	1 x 60 µm	1 x 80 µm	1 x 80 µm
Total film thickness	160 µm	200 µm	240 µm	280 µm	320 µm
Coating system VOC, g/m²	130	160	200	230	270

Example of the coating system marking: K43a - EN ISO 12944-5/ A3.11(EPZn(R)EP160/3-FeSa 2½).

USAGE Protection for steel surfaces exposed to atmospheric corrosion. Protection for steel surfaces subjected to humidity and splashes.

Teknos symbol	**Typical use**
K43a	Protection for steel surfaces in corrosivity categories C3 and C4.
K43b	Steel surfaces indoors and outdoors subjected to chemical splashes in corrosivity categories C3 and C4.
K43c	Protection for the wet end of the paper making machine also steel surfaces in corrosivity categories C4 and C5.
K43d	Protection for the wet end of the paper making machine (according to the standard of the painting system SSG 1005 - GB40 GA160 TA80) also steel surfaces in corrosivity category C4.
K43e	Protection for steel surfaces in corrosivity categories C4 and C5.

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).

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 SE Zinc Epoxy Prefabrication Primer and KORRO SS Zinc Silicate Prefabrication Primer.

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Application

Stir the components of the paints thoroughly before use. Mix base and hardener with each other in the proportions given on the paint labels and stir the mixture thoroughly. Mix only an amount sufficient to be used within the pot life of the mixture.

Apply the paints preferably by airless spray, since only this method provides the recommended film thickness in a single operation. The temperature of the air and the surface as well as the relative air humidity during the application and drying period must conform to the figures given in the table. Higher temperatures speed up the drying process. The surface must be dry and free from dust.

The technical data of the paints are given in the table below and in the data sheets of the products.

Maintenance

Touch-up: Surfaces with rust grades Ri 1 to Ri 3 can be repaired by touching up.
Remove flaking paint and rust from damaged areas by scraping and blast-cleaning. Extend the preparation over the edges of damages into the intact coating. If required, feather the edges of prepared areas. Touch up the prepared patches with the paints of the system to the original film thickness.
NOTE! TEKNOZINC 90 SE is to be applied to bare steel only, not over an old paint coat.

Complete renewal: Surfaces with rust grade Ri 4 are to be repainted completely, as the coating has lost its protective power. Blast-clean the whole surface to grade Sa 2½ and paint from priming to top coat as for new work.

Technical Data

Paint		TEKNOZINC 90 SE		TEKNOPLAST PRIMER 5		TEKNOPLAST 50		TEKNOPLAST 90	
Data Sheet	No.	15		918		443		857	
Paint Type		epoxy zinc rich paint		two-pack epoxy primer		two-pack epoxy paint		two-pack epoxy paint	
Colours		bluish grey		red, white, grey and yellow		Teknomix-tinting system		Teknomix-tinting system	
Finish		matt		semi-matt		semigloss		gloss	
Thinner		TEKNOSOLV 9506		TEKNOSOLV 9506		TEKNOSOLV 9506		TEKNOSOLV 9506	
Methods of application		airless spray		airless spray		airless spray or brush		airless spray or brush	
Airless spray nozzle		0.018 - 0.021" (turn-nozzle)		0.013 - 0.019"		0.013 - 0.019"		0.011 - 0.013"	
Application conditions - min. temperature - max. relative humidity	 °C %	 +10 80		 +10 80		 +10 80		 +10 80	
Safety markings		See Safety Data Sheet		See Safety Data Sheet		See Safety Data Sheet		See Safety Data Sheet	
Volume solids	%	53 ±2 (ISO 3233:1988)		53 ±2		53 ±2		53 ±2	
Total mass of solids	g/l	about 2100		about 900		about 800		about 760	
Volatile organic compound (VOC)	g/l	about 450		about 440		about 430		about 430	
Recommended film thickness - wet - dry	 µm µm	 75 40		 113 - 188 60 - 100		 113 - 150 60 - 80		 115 - 150 60 - 80	
Theoretical spreading rate m²/l		13.2		8.8 - 5.3		8.8 - 6.6		8.8 - 6.6	
Drying time at +23°C / 50% RH - dust free, (ISO 9117-3:2010) - touch dry, (DIN 53150:1995) Overcoatable, 50% RH		(dry film 40 µm) after 5 min after 30 min by itself or with TEKNOPLAST PRIMER 3:		(dry film 60 µm) after 1 h after 4 h by itself, TEKNOPLAST 50 or TEKNOPLAST 90:		(dry film 60 µm) after 1 h after 4 h by itself:		(dry film 60 µm) after 1 h after 4 h by itself:	
		min.	max.*	min.	max.*	min.	max.*	min.	max.*
+10°C		after 6 h	after 3 months	after 6 h	after 6 months	after 6 h	after 1 month	after 6 h	after 1 month
+23°C		after 1 h	after 3 months	after 2 h	after 6 months	after 2 h	after 1 month	after 2 h	after 1 month

* Maximum overcoating interval without roughening.