INERTA MASTIC HYBRID SYSTEMS

K41

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Coating systems for anti-corrosive painting on steel surfaces. The systems are used on objects where high solvent emissions are to be avoided and the maintenance coating can be done with water-borne painting systems. INERTA MASTIC Epoxy Coating with a low solvent content is used as a primer.

Teknos Coating System Symbol	**K41a**	**K41b**	**K41c**	**K41d**	**K41e**	**K41f**
EN ISO 12944-5 (2007) symbol/ corrosivity category / durability range	-	-	-	-	-	-
The coating system structure:	EPAY140/2-FeSa 2½	EPAY200/2-FeSa 2½	EP140/2-FeSa 2½	EP200/2-FeSa 2½	EPPUR140/2-FeSa 2½	EPPUR200/2-FeSa 2½
INERTA MASTIC or INERTA MASTIC MIOX Epoxy Coating	1 x 90 µm	1 x 160 µm	1 x 90 µm	1 x 160 µm	1 x 90 µm	1 x 160 µm
TEKNOCRYL AQUA 350 or TEKNOCRYL AQUA 390 Top Coat	1 x 50 µm	1 x 40 µm	-	-	-	-
TEKNOPOX AQUA 0350 Epoxy Top Coat	-	-	1 x 50 µm	1 x 40 µm	-	-
TEKNODUR AQUA 3390 Polyurethane Top Coat	-	-	-	-	1 x 50 µm	1 x 40 µm
Total film thickness	140 µm	200 µm	140 µm	200 µm	140 µm	200 µm
Coating System VOC, g/m²	30	48	26	44	34	51

Example of the coating system marking: K41a - EPAY140/2-FeSa 2½.

USAGE Steel structures exposed to atmospheric corrosion indoors and outdoors when low solvent emissions (VOC) are desired.

Teknos symbol	**Typical use**
K41a	Protection for steel surfaces in corrosivity category C2.
K41b	Protection for steel surfaces in corrosivity categories C2 and C3.
K41c	Protection for steel surfaces indoors in corrosivity category C2.
K41d	Protection for steel surfaces indoors in corrosivity categories C2 and C3.
K41e	Protection for steel surfaces in corrosivity category C2.
K41f	Protection for steel surfaces in corrosivity categories C2 and C3.

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.

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

PTO

Application Stir the components of the paint 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.
The primer is applied by thick painting brush or roller and is smoothed down with a brush. Airless spray can be used on the surfaces that have been cleaned with blast-cleaning. The top coat is applied by airless spray. On small areas brush can be used.
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.

Drying of the top coat The drying time of the top coat depends on the surface temperature, thickness of the paint film, drying temperature and ventilation.

Maintenance **Touch-up:** Surfaces with rust grade 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	INERTA MASTIC or INERTA MASTIC MIOX		TEKNOCRYL AQUA 350 or TEKNOCRYL AQUA 390		TEKNOPOX AQUA 0350		TEKNODUR AQUA 3390	
Data Sheet no.	INERTA MASTIC: 212 INERTA MASTIC MIOX: 549		TEKNOCRYL AQUA 350: 816 TEKNOCRYL AQUA 390: 817		666		1005	
Paint Type	Epoxy coating		Acrylate top coat		Epoxy top coat		Polyurethane top coat	
Colours	INERTA MASTIC: aluminium INERTA MASTIC MIOX: grey (MIOX-pigmented)		by agreement, Teknomix-tinting		Teknomix-tinting		by agreement, Teknomix-tinting	
Finish	Semi-matt		TEKNOCRYL AQUA 350: Semigloss TEKNOCRYL AQUA 390: Gloss		0350-05: semigloss 0350-09: gloss		3390-09: gloss 3390-07: abt. 70 (60° angle) 3390-05: semigloss 3390-03: semi-matt	
Thinner	TEKNOSOLV 9506		WATER		WATER		WATER, TEKNOSOLV 1936	
Methods of application	Airless spray , brush or roller		Airless spray, brush		Airless spray		Airless spray	
Airless spray nozzle	0.015 - 0.021"		0.011 - 0.015"		0.011 - 0.015"		0.011 – 0.013”	
Application conditions - min. temperature °C - max. relative humidity %	 +10 80		 +15 70		 +10 70		 +10 70	
Safety markings	See Material Safety Data Sheet		-		See Material Safety Data Sheet		See Material Safety Data Sheet	
Volume solids %	80 ±2		40 ±2		350-05: 45 ±2 390:-09 43 ±2		42 ±2	
Total mass of solids g/l	INERTA MASTIC: abt. 1200 INERTA MASTIC MIOX: abt.1300		TEKNOCRYL AQUA 350: abt. 500 TEKNOCRYL AQUA 390: abt. 460		350-05: abt. 650 390:09: abt. 610		abt. 560	
Volatile organic compound (VOC) g/l	abt. 210		TEKNOCRYL AQUA 350: abt. 56 TEKNOCRYL AQUA 390: abt. 55		abt. 20		abt. 90	
Recommended film thickness - wet µm - dry µm	 112 - 200 90 -160		 100 - 125 40 - 50		 88 - 111 40 - 50		 95 - 119 40 - 50	
Theoretical spreading rate m²/l	8.9 - 5.0		10.0 - 8.0		11.3 - 9.0		10.5 - 8.4	
Drying time, +23°C / 50 % RH - dust free (ISO 9117-3:2010) - touch dry (DIN 53150:1995) Overcoatable, 50% RH	(dry film 120 µm) after 4 h after 6 h by itself or TEKNOPLAST 50, 90, INERTA 50 or with TEKNODUR-series top coats		(dry film 40 µm) after 30 min after 40 min by itself		(dry film 60 µm) after 1 h after 5 h by itself or INERTA 50, TEKNOPLAST HS 150 or TEKNODUR-series top coats		(dry film 40 µm) after 2½ h after 6½ h by itself:	
	min.	max.*	min.	max.*	min.	max.*	min.	max.*
+10°C	after 1 d	after 7 d	-	-	after 24 h	after 1 month	after 24 h	after 14 d
+15°C	-		after 8 h	-	-	-	-	-
+23°C	after 6 h	after 7 d	after 4 h	-	after 4 h	after 1 month	after 6 h	after 14 d

* Maximum overcoating interval without roughening.