

# INERTA MASTIC SYSTEMS

# K46

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Coating systems for maintenance and touch-up painting of steel surfaces. The systems are used when environmental conditions do not allow blast-cleaning of the surface. The primer has good adhesion to wire-brushed steel and it provides a dense and thick paint coat in one application. The paint can also be used alone without a top coat. Suitable top coats are epoxy and polyurethane paints.

Teknos Coating System Symbol	K46a	K46c	K46d	K46e	K46b
EN ISO 12944-5 (2007) symbol/ corrosivity category / durability range	-	-	-	-	-
The coating system structure:	EP120/1-FeSt 2	EP160/2-FeSt 2	EP160/2-FeSt 2	EPPUR160/2-FeSt 2	EP240/2-FeSt 2
INERTA MASTIC Epoxy Coating or INERTA MASTIC MIOX Epoxy Coating	1 x 120 µm	1 x 120 µm	1 x 120 µm	1 x 120 µm	2 x 120 µm
TEKNOPLAST 50 Epoxy Top Coat or TEKNOPLAST 90 Epoxy Top Coat	-	1 x 40 µm	-	-	-
INERTA 50 Epoxy Top Coat	-	-	1 x 40 µm	-	-
TEKNODUR 0050 or TEKNODUR 0090 Polyurethane Top Coat	-	-	-	1 x 40 µm	-
Total film thickness	120 µm	160 µm	160 µm	160 µm	240 µm
Coating system VOC, g/m <sup>2</sup> paints INERTA MASTIC, TEKNOPLAST 50, TEKNODUR 0050	32	64	71	62	63

Example of the coating system marking: K46a - EP120/1-FeSt 2.

**Usage** Protection for wire-brushed steel surfaces exposed to atmospheric corrosion.

Teknos symbol	Typical use
K46a	Maintenance painting system that does not require a top coat. Usage e.g. under a heat insulation.
K46b	Maintenance painting system to be used when long service life and good mechanical durability is desired.
K46c	Maintenance painting system to be used when the top coat must have good abrasion and chemical resistance. The paint is semigloss.
K46d	Maintenance painting system to be used when the top coat must have good abrasion and chemical resistance. The paint is gloss.
K46e	Maintenance painting system to be used when the top coat must have good weather resistance. System in accordance with standard SFS 5873 for corrosivity category C3 (system R25.05).

**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:

**Painted surfaces:** Any impurities that might be detrimental to the application of paint (e.g. grease and salts) are removed. The surfaces must be dry and clean. Old, painted surfaces that have exceeded the maximum overcoating time are to be roughened as well. Damaged parts are prepared in accordance with the requirements of the substrate and the maintenance coating.

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.

**Application** Stir the components thoroughly before use. Mix the base and hardener carefully with each other in the proportions given on the paint labels. Mix only an amount sufficient to be used within the pot life of the mixture.  
Apply the primer with a brush or roller and smooth the surface with a brush. To blast-cleaned surfaces it can be also applied by airless spray. The top coats are applied by brush and large surfaces by airless spray. 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 below. 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 wire-brushing or blast-cleaning. Extend the preparation over the edges of damages into the intact coating. Touch up the prepared patches with the paints 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	TEKNOPLAST 50 or TEKNOPLAST 90	INERTA 50	TEKNODUR 0050 or TEKNODUR 0090		
Data Sheet	No.	INERTA MASTIC : 212 INERTA MASTIC MIOX: 549	TEKNOPLAST 50: 443 TEKNOPLAST 90: 857	10	TEKNODUR 0050: 682 TEKNODUR 0090: 683		
Paint Type		epoxy coating	epoxy top coat	epoxy top coat	polyurethane top coat		
Colours		INERTA MASTIC: aluminium INERTA MASTIC MIOX: grey (MIOX-pigmented)	Teknomix-Tinting	Teknomix-Tinting	Teknomix-Tinting		
Finish		semi-matt	TEKNOPLAST 50: semigloss TEKNOPLAST 90: gloss	gloss	TEKNODUR 0050: semigloss TEKNODUR 0090: gloss		
Thinner		TEKNOSOLV 9506	TEKNOSOLV 9506	TEKNOSOLV 9506	TEKNOSOLV 9521 or TEKNOSOLV 6220		
Methods of application		brush, roller, airless spray	airless spray, brush	airless spray, brush	airless spray		
Airless spray nozzle		0.015 - 0.021"	TEKNOPLAST 50: 0.013-0.019" TEKNOPLAST 90: 0.011-0.013"	0.011 - 0.015"	TEKNODUR 0050: 0.011-0.013" TEKNODUR 0090: 0.011- 0.013"		
Application conditions							
- min. temperature	°C	+10	+10	+10	+5		
- max. relative humidity	%	80	80	80	80		
Safety markings		See Safety Data Sheet	See Safety Data Sheet	See Safety Data Sheet	See Safety Data Sheet		
Volume solids	%	80 ±2	53 ±2	48 ±2	TEKNODUR 0050: abt. 56 ±2 (ISO 3233:1988) TEKNODUR 0090: abt. 50 ±2 (ISO 3233:1988)		
Total mass of solids	g/l	INERTA MASTIC: abt. 1200 INERTA MASTIC MIOX: abt.1300	TEKNOPLAST 50: abt. 800 TEKNOPLAST 90: abt. 760	abt. 700	TEKNODUR 0050: abt. 870 TEKNODUR 0090: abt. 730		
Volatile organic compound (VOC)	g/l	abt. 210	abt. 430	abt. 480	TEKNODUR 0050: abt. 430 TEKNODUR 0090: abt. 460		
Recommended film thickness					TEKNODUR 0050: 71 40 TEKNODUR 0090: 80 40		
- wet	µm	150	75	83			
- dry	µm	120	40	40			
Theoretical spreading rate	m <sup>2</sup> /l	6.7	13.2	12.0	TEKNODUR 0050: 14.0 TEKNODUR 0090: 12.5		
Drying time at +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, TEKNOPLAST 50, 90, INERTA 50 or TEKNODUR -series top coats	(dry film 60 µm) after 1 h after 4 h by itself:	(dry film 40 µm) after 1 h after 6 h by itself:	(dry film 40 µm) after 1 h after 6 h by itself:		
		min.	max.*	min.	max.*	min.	max.*
+5°C		-	-	-	-	after 20 h	-
+10°C		after 1 d	after 7 d	after 6 h	after 1 month	after 24 h	after 3 months
+23°C		after 6 h	after 7 d	after 2 h	after 1 month	after 12 h	after 3 months

\* Maximum overcoating interval without roughening.