

## SikaCor® EG-System

Epoxy resin MIO + polyurethane

### Product description

SikaCor EG-System is a combination of 2-component priming- and intermediate coats based on epoxy resin/micaceous iron oxide and polyurethane top coats with high chalking resistance and colour retention.

The SikaCor EG-System is approved according to German standard "TL/TP-KOR Stahlbauten", page 87.

For coatings of galvanized steel a test report is also available.

In a layer thickness of 20 microns SikaCor EG-Phosphate can also be used as a weldable shop primer. An approval is available upon request.

By adding 1% b.w. SikaCor PUR Accelerator (see product data sheet for more information) a faster touch-drying and full curing will be achieved.

### Fields of application:

Robust corrosion protection for steel, aluminium and galvanized surfaces providing a durable and decorative effect. Mainly for bridges, pipe lines, containers, industrial and harbour installations, sewage treatment plant and large machinery; submerged or non submerged in industrial or marine environments. Particularly suited for workshop application as heavy duty travel coat system.

### Properties:

The coating system combines the excellent corrosion protection abilities of epoxy resins in primer and intermediate coats with the outstanding weather resistance of polyurethane top coats.

- **Excellent chemical, weather and colour retention**
- **Tough elastic and dense but not brittle**
- **Shock and impact resistant**
- **Abrasion resistant**
- **Temperature resistant up to 150°C**

### Product data

#### Grades:

SikaCor Zinc R:	zinc grey, tinted red, material no. 687.03/04
SikaCor EG-Phosphate:	sand-yellow, approx. RAL 1002, material no. 687.02
SikaCor EG-Phosphate:	red-brown, approx. RAL 8012, material no. 687.06
SikaCor EG-Phosphate:	zinc grey, approx. RAL 7005
SikaCor EG 1:	grey approx. DB 702, DB 703, DB 601 respectively material no. 687.12/13/14; white and approx. DB 701
SikaCor EG 4:	metallic shades, material no. 687.30 – 687.74
SikaCor EG 5:	RAL colour shades, material no. 687.75 – 687.99

#### Colour shades:

See above.  
Because of the raw materials used, slight batch to batch colour variations are unavoidable.

<b>Packaging:</b>	SikaCor EG-Phosphate:	30, 15 and 3 kg net.
	SikaCor EG 1:	30, 15 and 3 kg net.
	SikaCor EG 4:	30, 12,5 and 3 kg* net.
	SikaCor EG 5:	30, 10 and 3 kg* net
	Thinner EG:	25, 10 and 3 litres
	SikaCor Zinc R:	26, 15 and 7 kg net.
	SikaCor Cleaner:	25, 160 litres

(\* minimum quantity for some colour shades)

<b>Shelf life:</b>	In original sealed containers in a cool and dry environment:	
	SikaCor Zinc R:	1 year
	SikaCor EG-Phosphate, SikaCor EG 1:	3 years
	SikaCor EG 4, SikaCor EG 5:	2 years

## Systems

<b>Coating systems:</b>	<u>Steel:</u>
	3-coat system
	1 x SikaCor EG-Phosphate or 1 x SikaCor Zinc R
	1 x SikaCor EG 1
	1 x SikaCor EG 4 or SikaCor EG 5
	4-coat system for extreme exposure
	1 x SikaCor EG-Phosphate or 1 x SikaCor Zinc R
	2 x SikaCor EG 1
	1 x SikaCor EG 4 or SikaCor EG 5
	In case of permanent submersion or exposure to condensation prime with SikaCor Zinc R only.
<u>Galvanized surfaces and aluminium:</u>	
1x SikaCor EG 1	
1x SikaCor EG 4 or SikaCor EG 5	
When applying the light colours of SikaCor EG 5 a second coat may become necessary to achieve perfect opacity.	

<b>Surface preparation:</b>	<u>Steel:</u>
	Blast cleaning to Sa 2 <sup>1/2</sup> according to EN ISO 12944, part 4.
	Free from dirt, oil and grease.
	<u>Galvanized surfaces and aluminium:</u>
	Free of oil, grease and zinc salts.
	In case of permanent submersion and condensation surfaces should be sweep blasted.
For contaminated and weathered surfaces e.g. galvanized or primed areas we recommend to clean with SikaCor Wash.	

## Technical data

<b>Material consumption:</b>	Specific gravity liquid	Solids content approx. %		Theoretical material-consumption/ coverage without loss for medium dry film thickness of			
		approx. kg/L	by vol.	by weight	dry microns	wet microns	approx. kg/m <sup>2</sup>
SikaCor EG-Phosphate	1.6	62	80	20 80	30 130	0.050 0.205	20.00 4.85
SikaCor EG 1	1.6	60	77	80	135	0.215	4.65
SikaCor EG 4	1.4	55	70	80	145	0.205	4.85
SikaCor EG 5	1.3	59	72	60 80*)	100 135	0.135 0.175	7.45 5.70
SikaCor Zinc R	2.8	67	89	60 80**)	90 120	0.250 0.335	4.00 3.00

\*) In case of high air humidity CO<sub>2</sub>-bubbles may occur.

\*\*\*) For spray application:

Apart from small areas the dry film thickness of Fiazinc R should not exceed 150 microns per layer.

The dry film thickness of the primer coat does not respect the correction factors on rough surfaces according to ISO 19840.

With SikaCor EG-Phosphate and SikaCor EG 1 up to 120 microns dry film thickness per operation can be achieved by spray.

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<b>Mixing ratio in parts by weight:</b> (Components A : B)	SikaCor EG Phosphate/SikaCor EG 1:	90 : 10
	SikaCor EG 4:	92 : 8
	SikaCor EG 5:	90 : 10
	SikaCor Zinc R:	94 : 6

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**Resistance:**

Chemical influences:  
The SikaCor EG-System is resistant to weather, water, sewage, seawater, smoke, de-icing salts, acid and lye vapours, oils, grease and short term exposure to fuels and solvents.

Temperature:  
Depending on the used primer coat:  
SikaCor EG Phosphate: dry heat up to + 100°C, short term up to + 150°C  
SikaCor Zinc R: dry heat up to + 150°C, short term up to + 180°C  
damp heat up to approx. + 50°C

The approval is available upon request  
In case of higher temperatures please consult us.

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## Hints on application

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**Mixing instructions/ mixing time:** Stir component A very thoroughly using an electric mixer (start slowly, then increase up to approx. 300 rpm). Add component B carefully and mix both components very thoroughly (including sides and bottom of the container). Mix for at least 3 minutes until a homogeneous mixture is achieved. Fill mixed material into clean container and mix again shortly as described above. During mixing and handling of the materials always wear protective goggles, suitable gloves and other protective clothings.

In case of using SikaCor EG Phosphate as weldable shop coating add approx. 20% Thinner EG, using SikaCor Zinc R add 12% Thinner K.

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**Application method:** The method of application has a major effect on achieving uniform thickness and appearance. Spray application will give the best results. The indicated dry film thickness is easily achieved by airless spray and by brush. Adding solvents reduces the sag resistance and the dry film thickness. In case of application by roller or brush, additional applications may become necessary to achieve the required coating thickness, depending on type of construction, site conditions, colour shade etc. Prior to major coating operations a test application on site may be useful to ensure the selected application method will provide the requested results.

By brush and roller:

In order to achieve an attractive appearance, it is recommended - in case of coatings containing micaceous iron oxide - to spray apply the last top coat or to brush or roller in one direction only to avoid streaking.

Conventional high pressure spraying:

Nozzle size 1.5 – 2.5 mm; pressure 3 – 5 bar, oil and water trap is compulsory. Up to max. 5% Thinner EG may be added.

Airless-spraying:

With a spray pressure in gun of min. 180 bar;  
Nozzle size 0.38 – 0.53 mm (0.015 – 0.021 inch); spraying angle 40° - 80°.

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**Application temperature:** Min. + 5°C  
(material and surface)

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**Potlife:**

SikaCor EG Phosphate, SikaCor EG 1 and SikaCor Zinc R	SikaCor EG 4 and SikaCor EG 5
at + 10°C approx. 12 hours	at + 10°C approx. 7 hours
at + 20°C approx. 8 hours	at + 20°C approx. 5 hours
at + 30°C approx. 5 hours	at + 30°C approx. 4 hours

**Drying degree 6  
(DIN 53150):**

Material	Dry film thickness	+ 5°C after	+ 23°C after	+ 40°C after	+ 80°C after
SikaCor Zinc R	60 µm	3 h	2½ h	1½ h	45 min
SikaCor EG Phosphate	80 µm	10 h	3½ h	25 min	15 min
SikaCor EG 1	80 µm	12 h	6 h	75 min	20 min
SikaCor EG 4	80 µm	19 h	12 h	1½ h	20 min
SikaCor EG 5	80 µm	21 h	14 h	3 h	45 min

**Waiting time  
between coats:**

Min.: until drying degree 6 is achieved  
Max.: 4 years

In case of longer waiting times please contact Sika.

Prior to further applications possible contamination must be removed (see page 2 surface preparation).

**Final drying time:**

Depending on film thickness and temperature full hardness is achieved after 1-2 weeks. Tests of the completed coating system should only be carried out after final curing.

**Thinner:**

Thinner EG  
SikaCor Zinc R: Thinner K

**Cleaning of  
implements:**

SikaCor Cleaner  
Spraying equipment must be rinsed with Thinner EG before using PUR top coats.

**Important notice****Directive 2004/42/CE  
(Decopaint):**

For product category IIA / j, Type SB, the maximum permissible content of VOC as per directive 2004/42/CE is 500 g/litre (limit 2010).

The maximum content of SikaCor EG Phosphate, SikaCor Zinc R, SikaCor EG 1, SikaCor EG 4 and SikaCor EG 5 remains below 500 g/litre VOC".

**Health and Safety  
Information:**

Please observe safety instructions on container labels and local regulations.  
Dangerous Goods regulations have to be followed.

During application in closed rooms, pits and shafts etc., sufficient ventilation must be provided. Keep away open light, including welding.

In poorly lit rooms only electric safety lamps are permitted. The installed ventilation equipment must be spark-proof.

In a liquid, or not fully cured state, the thinner and the products contaminate water and should not be allowed to enter drains or be spilled onto open ground. All spillages and liquid waste must be removed according to local Health and Safety regulations.

Further details are contained in our instructions "Health protection and the prevention of accidents".

**Value Base:**

All technical data stated in this Product Data Sheet are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.

**Legal Notes:**

The information, and, in particular, the recommendations relating to the application and end-use of Sika products, are given in good faith based on Sika's current knowledge and experience of the products when properly stored, handled and applied under normal conditions in accordance with Sika's recommendations. In practice, the differences in materials, substrates and actual site conditions are such that no warranty in respect of merchantability or of fitness for a particular purpose, nor any liability arising out of any legal relationship whatsoever, can be inferred either from this information, or from any written recommendations, or from any other advice offered. The user of the product must test the product's suitability for the intended application and purpose. Sika reserves the right to change the properties of its products. The proprietary rights of third parties must be observed.

# Protective Coatings

All orders are accepted subject to our current terms of sale and delivery. Users must always refer to the most recent issue of the local Product Data Sheet for the product concerned, copies of which will be supplied on request.



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