

PRODUCT DATA SHEET

SikaCor® EG-1 Plus

Versatile applicable, high-solid epoxy-based corrosion protection coating

DESCRIPTION

SikaCor® EG-1 Plus is a 2-pack economical anti-corrosion coating based on epoxy resin containing micaceous iron oxide.

Low solvent content acc. to Protective Coatings Directive of German Paint Industry Association (VdL-RL 04).

USES

SikaCor® EG-1 Plus may only be used by experienced professionals.

Designed as a mechanically resistant intermediate on steel surfaces exposed to atmospheric conditions, hot-dip galvanized steel, stainless steel and aluminium. It can also be used as primer on steel and sealer for thermal-sprayed zinc coatings.

In combination with 2-pack primer and top coats, SikaCor® EG-1 Plus is a mechanically water and chemically resistant coating system for durable corrosion protection, corrosivity category C5 very high acc. to ISO 12944-2.

CHARACTERISTICS / ADVANTAGES

- Low consumption per square meter
- Fast curing, short overcoating time
- Direct to steel, hot-dip galvanized steel, zinc spraying, stainless steel and aluminium
- Very good corrosion protection
- Broad range of dry film thicknesses per coat from 60 - 160 µm
- Suitable as sealer for thermal-sprayed zinc coatings

APPROVALS / STANDARDS

- Approved according to German standard 'TL/TP KOR-Stahlbauten, Blatt 87'
- Approved according to German standard 'TL/TP KOR-Stahlbauten, Blatt 50'
- Approved according to Austrian standard RVS 15.05.11 and RVS 08.09.02 System S18 and S19.
- Certificates for C4 high, C5 high and very high acc. ISO 12944 are available

PRODUCT INFORMATION

Packaging	SikaCor® EG-1 Plus	30 kg, 15 kg and 3 kg net.
	Sika® Thinner EG	25 l, 10 l and 3 l
	SikaCor® Cleaner	160 l and 25 l
Appearance / Colour	MIO color shades (containing micaceous iron oxide)	
	Grey metallic ap. DB 702, mat.-no. 687.12;	
	Grey metallic ap. DB 703, mat.-no. 687.13;	
Shelf Life	Green metallic ap. DB 601, mat.-no. 687.14;	
	MIO-free color shades (free of micaceous iron oxide)	
	White, mat.-no. 650.97	
Storage Conditions	Slight colour deviations are possible due to raw material characteristics.	
	2 years	
In originally sealed containers in a cool and dry environment.		

Density	MIO color shades	~1.5 kg/l
	MIO-free color shades	~1.4 kg/l
Solid Content	MIO color shades	~69 % by volume
		~81 % by weight
	MIO-free color shades	~70 % by volume
		~81 % by weight

TECHNICAL INFORMATION

Chemical Resistance	Weather, water, sewage, seawater, smoke, de-icing salts, acid and lye vapours, oils, grease and short term exposure to fuels and solvents.
Thermal Resistance	Dry heat up to + 150°C, short term up to + 200°C Damp heat up to approx. + 50°C In case of higher temperatures please consult Sika.

SYSTEM INFORMATION

Systems	Steel
	As primer or single coat system: 1 x SikaCor® EG-1 Plus
	Used as intermediate coat on top of Sika primers e.g.:
	<ul style="list-style-type: none"> ▪ SikaCor® Zinc R (Plus) ▪ SikaCor® EG Phosphat Plus ▪ Sika Poxicolor® Primer HE NEW ▪ SikaCor® Zinc ZS
	Suitable top coats: Versatile overcoatable with 1- or 2-pack Sika products.
	Hot dip galvanized steel, aluminium and stainless steel 1 x SikaCor® EG-1 Plus 1 x top coat (see above)
Thermal-sprayed metallic zinc coatings 1 x SikaCor® EG-1 Plus as sealer 1 x SikaCor® EG-1 Plus	

APPLICATION INFORMATION

Mixing Ratio	Components A : B	
	By weight	90 : 10
	By volume	5.7 : 1
Thinner	Sika® Thinner EG Adapt the viscosity: If necessary add max. 5 % Sika® Thinner EG. If used as a sealer: Thinn with 20 % Sika® Thinner EG. Use the heavily diluted material immediately and under constant stirring.	
Consumption	Theoretical material-consumption/VOC without loss for medium dry film thickness:	
	MIO color shades	
	Dry film thickness	80 µm 160 µm
	Wet film thickness	116 µm 232 µm
	Consumption	~0.174 kg/m ² ~0.348 kg/m ²
	VOC	~33 g/m ² ~66 g/m ²

The dry film thickness of SikaCor® EG-1 Plus in MIO containing color shades should not exceed 320 µm per layer.

MIO-free color shades

Dry film thickness	80 µm	160 µm
Wet film thickness	114 µm	228 µm
Consumption	~0.160 kg/m ²	~0.320 kg/m ²
VOC	~30 g/m ²	~60 g/m ²

The dry film thickness of SikaCor® EG-1 Plus in MIO-free color shades should not exceed 400 µm per layer.

Product Temperature	Min. + 5°C	
Relative Air Humidity	Max. 85 %, except the surface temperature is significantly higher than the dew point temperature, it shall be at least 3 K above dew point.	
Surface temperature	Min. + 5°C	
Pot Life	At + 10°C	~12 h
	At + 20°C	~8 h
	At + 30°C	~5 h

Drying Stage 6		Dry film thickness 80 µm	(ISO 9117-5)
	+ 5°C after	12 h	
	+ 10°C after	8 h	
	+ 20°C after	4 h	
	+ 40°C after	75 min	
	+ 80°C after	20 min	
		Dry film thickness 160 µm	(ISO 9117-5)
	+ 5°C after	20 h	
	+ 10°C after	12 h	
	+ 20°C after	5.5 h	
	+ 40°C after	2 h	

Different temperatures and dry film thicknesses have a significant influence on the drying and curing time.

Waiting Time / Overcoating	Min.: Until drying stage 6 is achieved. Higher layer thicknesses, but also lower temperatures than specified, lead to longer drying times. The overcoating intervals can be delayed and may need to be determined on site.
	Max.: 4 years In case of longer waiting times please contact Sika.
	Prior to further applications possible contamination must be removed.
	Note, if using as a sealer: Pre-spray the thinned SikaCor® EG-1 Plus thinly onto the thermal-sprayed zinc coat and after a waiting time of approx. 15 minutes, spray 'wet on wet' the missing layer thickness of SikaCor® EG-1 Plus.

Drying Time	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.
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BASIS OF PRODUCT DATA

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.

ECOLOGY, HEALTH AND SAFETY

For information and advice on the safe handling, storage and disposal of chemical products, users shall refer to the most recent Material Safety Data Sheet (MSDS) containing physical, ecological, toxicological and other safety-related data.



APPLICATION INSTRUCTIONS

SURFACE PREPARATION

Steel:

Blast-cleaning to Sa 2 ½ according to ISO 12944-4. Free from dirt, oil and grease.

Hot dip galvanized steel, stainless steel, aluminium:

Free from dirt, oil, grease and corrosion products. In case of permanent immersion and condensation the surfaces must be slightly sweep blasted with a ferrite-free blasting abrasive.

Thermal-sprayed zinc:

Free from dirt, oil, grease and corrosion products.

For contaminated surfaces e.g. galvanized or primed areas we recommend cleaning with SikaCor® Wash.

MIXING

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.

APPLICATION

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. 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

Conventional high pressure spraying:

- Nozzle size 1.5 - 2.5 mm
- Pressure 3 - 5 bar
- Oil and water trap is compulsory

Airless-spraying:

- Pressure min. 180 bar
- Nozzle size 0.38 - 0.53 mm (0.015 - 0.021 inch)
- Spraying angle 40° - 80°

CLEANING OF TOOLS

SikaCor® Cleaner

LOCAL RESTRICTIONS

Please note that as a result of specific local regulations the performance of this product may vary from country to country. Please consult the local Product Data Sheet for the exact description of the application fields.

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. 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. It may be necessary to adapt the above disclaimer to specific local laws and regulations. Any changes to this disclaimer may only be implemented with permission of Sika® Corporate Legal in Baar.

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