

Technical Data-Sheet

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DS-Code: E1615

Icosit[®] EG-System

Epoxy resin MIO + polyurethane

Product description

Icosit 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 Icosit EG-System is approved according to German standard "TL/TP-KOR Stahlbauten".

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

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

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.
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Construction



Sika[®]

Product data

Grades: Icosit EG 1: DB 702
Icosit EG 5: Group 1, 2, 3 & 4 colours and in-pail tinting for BS 4800/381C and RAL colours

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

Packaging: Icosit EG 1: 15 and 3 kg net.
Icosit EG 5: 10 and 3 kg* net
(*minimum quantity for some colour shades)

Shelf life: In originally sealed containers in a cool and dry environment:
Friazinc R: 1 year
Icosit EG Phosphate, Icosit EG 1: 3 years
Icosit EG 4, Icosit EG 5: 2 years

Systems

Coating systems: Steel:
3-coat system
1 x Icosit EG Phosphate or 1 x Friazinc R
1 x Icosit EG 1
1 x Icosit EG 4 or Icosit EG 5

4-coat system for extreme exposure
1 x Icosit EG Phosphate or 1 x Friazinc R
2 x Icosit EG 1
1 x Icosit EG 4 or Icosit EG 5

In case of permanent submersion or exposure to condensation prime with Friazinc R only.
Galvanized surfaces and aluminium:
1x Icosit EG 1
1x Icosit EG 4 or Icosit EG 5

When applying light colours of Icosit EG 5 a second coat may become necessary to achieve perfect opacity.

Surface Preparation: Steel:
blast cleaning to Sa 2½ according to EN ISO 12944, part 4, free from dirt, oil and grease.
Galvanized surfaces and aluminium:
Free of oil, grease and zinc salts.

In case of permanent exposure to submersion and condensation surfaces should be sweep blasted.

Technical data

Material consumption:

	Specific gravity liquid approx. kg/L	Solids content approx. %		Theoretical thickness with 100 g/m ² consumption		Material-consumption for medium dry film thickness of	
		by vol.	by weight	wet microns	dry microns	microns	approx. kg/m ²
Icosit EG Phosphate	1,6	62	80	63	39	20 80	0,050 0,205
Icosit EG 1	1,6	60	77	63	38	80	0,215
Icosit EG 4	1,4	55	70	71	39	80	0,205
Icosit EG 5	1,3	59	72	77	45	60 80*)	0,135 0,175
Friazinc R	2,8	67	89	36	24	60 80**)	0,250 0,335

*) In case of high air humidity CO₂-bubbles may occur.

**) For spray application:

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

With Icosit EG Phosphate and Icosit EG 1 up to 120 microns dry film thickness per application can be achieved by spray.

Mixing ratio in parts by weight: (Components A : B)	Icosit EG Phosphate / Icosit EG 1:	90 : 10
	Icosit EG 4:	92 : 8
	Icosit EG 5:	90 : 10
	Friazinc R:	94 : 6

Resistance:

Chemical influences:

The Icosit 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:

Icosit EG Phosphate: dry heat up to + 100°C, short term up to + 150°C

Friazinc R: dry heat up to + 150°C, short term up to + 180°C

damp heat up to approx. + 50°C

An approval is available upon request

In case of higher temperatures please consult Sika.

Hints on application

Preparation of material: Stir Component A very thoroughly using an electric stirrer. Add component B and mix both components very thoroughly (including sides and bottom of the container).
In case of using Icosit EG Phosphate as weldable shop coating add approx. 20% Thinner EG, using Friazinc R add 12% Thinner K..

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 roll on 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% b.w. 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°

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

Potlife: Icosit EG Phosphate, Icosit EG 1 and Friazinc R: Icosit EG 4 and Icosit 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):

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

Waiting time between coats:

Product	Dry film thickness	Min waiting time at 23°C
Friazinc R	60 µm	2½ hours
Icosit EG Phosphate	80 µm	8 hours
Icosit EG 1	80 µm	12 hours
Icosit EG 4	80 µm	16 hours
Icosit EG 5	80 µm	16 hours

Prior to further applications possible contamination must be removed.

Max.: 4 years. In case of longer waiting times please contact Sika.

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

Cleaning of implements: Thinner EG
Friazinc R: Thinner K

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 Icosit EG Phosphate, Friazinc R, Icosit EG 1 and Icosit EG 5 remains below 500 g/litre VOC".

For product category IIA / j, Type SB, the maximum permissible content of VOC as per directive 2004/42/CE is 550 g/litre (limit 2007).

The maximum content of Icosit EG 4 remains below 550 g/litre VOC".

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.

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.

Health and Safety Information

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

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.



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ISO 14001 ISO 9001