

Icosit® EG-System

Epoxy resin MIO + polyurethane

Product description:

The Icosit EG-System is a combination of 2-pack primers and intermediate coatings based on an epoxy resin/micaceous iron oxide combination with polyurethane based top coats, offering excellent resistance against chalking as well as colour retention.

Icosit EG-Phosphate, Friezinc R, Icosit EG 1, Icosit EG 4 and Icosit EG 5 have been tested and approved by German Railways and comply with TL 918 300, page 87.

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.

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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Grades:

Icosit EG-Phosphate, sand yellow approx. RAL 1002, material no. 687.02
Icosit EG-Phosphate, redbrown approx. RAL 8012, material no. 687.06 and creme white
Friezinc R, zinc grey, material no. 687.03
Icosit EG 1, grey approx. DB 702 or 703 respectively, material no. 687.12/13, white
Icosit EG 4, metallic shades, material no. 687.30-687.74
Icosit EG 5, RAL colour shades

Colour shades:

See price-list or colour shade card respectively.

Slight colourshade deviations of the mentioned colourshades are unavoidable due to raw materials.

Packaging:

Icosit EG-Phosphate: 30, 15 and 3 kg net
Icosit EG 1: 30, 15 and 3 kg net
Icosit EG 4: 30, 12,5 and 3 kg net.
Icosit EG 5: 30, 10 and 3 kg net
Thinner EG: 25, 10 and 3 ltr
Friezinc R: 26, 15 and 7 kg net.



REG. NR. 39116
Sika Chemie GmbH



CONSTRUCTION

Shelf life:

In original sealed containers, in dry and cool environment:

Friazinc R: min. 1 year

Icosit EG-Phosphate, Icosit EG 1: min. 3 years

Icosit EG 4, Icosit EG 5: min. 2 years.

Coating system:

Steel:

3-coat system

1x Icosit EG-Phosphate or:

1x Friazinc R

1x Icosit EG 1

1x Icosit EG 4 or Icosit EG 5

4-coat system for extreme exposure

1x Icosit EG-Phosphate or:

1x Friazinc R

2x Icosit EG 1

1x 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 colourshades of Icosit EG 5 a second coat may become necessary to achieve perfect opacity.

Material consumption:

	Specific gravity liquid approx. kg/ltr.	Solids content approx. %		Theoretical layer thickness with a consumption of 100 g/m ²		Theoretical mat. consump. 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	61	38	20 80	0,050 0,210
Icosit EG 1	1,6	65	82	62	40	80	0,200
Icosit EG 4	1,4	55	70	72	40	80	0,200
Icosit EG 5	1,3	57	71	78	44	60 80*)	0,135 0,180
Friazinc R	2,8	67	90	36	24	60 80**)	0,250 0,340

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

***) when spraying

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

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

Mixing ratio in parts
by weight:
(Component A : B)

Icosit EG-Phosphat: 90 : 10
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, flue gas, deicing salts, acid and lye vapours, oils, fats and short term exposure to fuels and solvents.

Temperature: Depends on primer used.

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.

Test report available.

In case of higher temperatures please consult us.

Application:

Surface preparation:

Steel:

Blastcleaning to Sa 2,5 according to ISO 12 944, part 4, free of dirt, oil and grease.

Galvanized surfaces and aluminium:

Free of oil, grease and zinc salts.

In case of permanent submersion and condensation surfaces should be lightly whip blasted.

Preparation of material:

All grades are prebatched in 2 components. Stir base component well; add the hardener and mix thoroughly, if possible with an electric stirrer. Take care to stir well at the bottom and the wall of the tin.

When using Icosit EG-Phosphate as a weldable shop primer, add approx. 20% by weight Thinner EG and do not exceed 20 microns dry film thickness.

Application methods:

The method of application has got a major effect on achieving uniform thickness and appearance. Spray application will usually give the best results. The indicated dry-film thickness is easily achieved by airless spray and usually also achievable by brush. Adding solvents reduces the sag resistance and the dry-film thickness. In case of application by roller, sometimes also by brush, additional applications may become necessary to achieve the required coating thickness, depending on type of construction, site conditions, colour shade etc. Before starting major coating operations, it may be useful to check with a test application on site whether the selected application method with the specified product will provide the requested results.

Brush or 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.

Spraying:

High pressure spraying, nozzle with a bore of 1,5-2,5 mm, pressure 3-5 bar. It is necessary to use an oil and water trap. If necessary, 5% by weight Thinner EG may be added.

Airless Spraying:

Spray pressure in the gun at least 180 bar; nozzle with a bore of 0,38-0,53 mm, spray angle 40-80°.

Application temperature:
(material and surface)

at least + 5°C.

In case of temperatures below + 15°C an addition of 3-5% by weight Thinner EG may become necessary to adjust the viscosity.

Pot life:

Icosit EG-Phosphate, Icosit EG 1 and Friazinc R:

at + 10°C approx. 12 hours

at + 20°C approx. 8 hours

at + 30°C approx. 5 hours

Icosit EG 4 and Icosit EG 5:

at + 10°C approx. 7 hours

at + 20°C approx. 5 hours

at + 30°C approx. 4 hours.

Drying degree 6 according to DIN 53 150:

Product	Dry film	+ 5°C	+ 23°C	+ 40°C	+ 80°C
Friazinc R	60 microns	1 hour	30 min.	20 min.	5 min.
Icosit EG-Phosphat	80 microns	10 hours	3,5 hours	25 min.	15 min.
Icosit EG 1	80 microns	12 hours	6 hours	75 min.	20 min.
Icosit EG 4	80 microns	19 hours	12 hours	90 min.	20 min.
Icosit EG 5	80 microns	21 hours	14 hours	3 hours	45 min.

Waiting times between coats:	Minimum 1 day at + 20°C. Between Friazinc R and Icosit EG 1: min. 4 hours. Prior to next application remove contamination. Maximum 4 years. In case of longer waiting times contact Sika Chemie.
Final drying:	Full curing is achieved within 1-2 weeks, depending on layer thickness and temperature. Tests of the completed coat should not be carried out until complete curing has taken place.
Thinning and cleaning of implements:	Thinner EG

Precautionary measures:

The following products fall under the dangerous goods regulations: components A+B of Friazinc R, Icosit EG 4 + 5 class 3.3; component A of Icosit EG 1 and EG-Phosphate also class 3.3.
Component B of Icosit EG-Phosphate and Icosit EG 1 class 8.

Please observe safety instructions on the containers as well as local regulations. In a liquid or not fully cured state the thinner and the products contaminate water and should not get into drains, water and ground.

Remnants of thinner and coating materials should be removed according to regulations.

Icosit EG 4/EG 5 contain isocyanate.
Coating materials containing isocyanate can irritate eyes, respiratory tracts and skin and may cause allergic reactions.

Allergic persons and persons with a tendency to illnesses of the respiratory tracts should not be employed for this type of work.

During application and drying in confined areas, ditches, shafts etc. adequate ventilation must be provided. Open fire and other igniting agents (e.g. welding works) must be avoided.

In badly lit rooms electric safety lamps are permitted. The installation of ventilating equipment must be spark-safe.

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

"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 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 proprietary rights of third parties must be observed. All orders are accepted subject to our current terms of sale and delivery. Users should always refer to the most recent issue of the Technical Data Sheet for the product concerned, copies of which will be supplied upon request."

