

Technical Data Sheet

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® KORROPLAST EP 410

Synthetic resin coating for steel and concrete substrates

Description

KORROPLAST EP 410 is a coating material on the basis of epoxy resin. The layer thickness may range between 0.2 and 1.5 mm depending on the requirement.

Typical uses

KORROPLAST EP 410 is used to protect concrete and steel surfaces of components which are exposed to corrosive media.

KORROPLAST EP 410 is predominantly used to protect wall surfaces in factories of the chemical industry and other industrial branches.

Properties

KORROPLAST EP 410 offers a good resistance to chemical media, e.g. where splashes of lyes, acids and brines may reach the components to be protected. The coating stands out for its high adhesion to steel and concrete.

Chemical resistance

Information on the chemical resistance properties will be furnished on request.

Substrate

Steel structures shall comply with the requirements of DIN EN 14879-1.

Surface pretreatment

Steel: The steel surface shall be sandblasted to a metallic bright finish. A preparation degree of Sa 2 ½ as specified in DIN EN ISO 12944-4 and a roughness grade "medium (G)" as specified in ISO 8503-1 must be achieved; minimum surface roughness $R_z = 70 \mu\text{m}$. After blasting the surface shall be primed.

Concrete: If required the concrete substrate must be treated by means of blasting in such a way that it is free from cement slurries, cement skin, loose and brittle particles, defects and separating substances. The residual moisture of the concrete surface shall be < 4 %.

Application

KORROPLAST EP 410 consists of a two-component Top Coat. After substrate preparation

the steel must be primed. An additional Spreader Coat is applied where concrete serves as substrate.

Mixing ratios	Parts by Weight (kg)	Parts by Volume (l)
<u>Primer (for steel)</u>		
KCH EP solution 2	100	2.00
KCH EP hardener 6	60	1.30
<u>Spreader Coat (concrete-floor)</u>		
KCH EP solution 7	100	2.00
KCH EP hardener 6	40	1.00
KCH powder 51	250	4.70
<u>Spreader Coat (concrete-wall)</u>		
KCH EP solution 7	100	2.00
KCH EP hardener 6	40	1.00
KCH powder 51	350	6.60
<u>Top Coat</u>		
KCH EP solution 7	100	2.00
KCH EP hardener 6	40	1.00

Apply Primer or Spreader Coat to the steel or concrete substrate. Then apply the top coat. The total coating thickness shall be approx. 0.3 mm for steel substrates and approx. 0.5 to 1.5 mm for concrete substrates.

Pot life

Temperature	Primer	Spreader Coat	Top Coat
15°C	~ 45 min.	~ 40 min.	~ 40 min.
20°C	~ 30 min.	~ 30 min.	~ 30 min.
30°C	~ 20 min.	~ 13 min.	~ 13 min.

Coverage

Primer: approx. 0.3 kg/m² (for steel only)
 Spreader Coat (1 mm): approx. 1.4 kg/m² (for concrete only)
 Top Coat: approx. 0.25 kg/m²

Packing

The following standard quantities are available:

KCH EP solution 2	5, 20 kg
KCH EP solution	20 kg
KCH EP hardener 6	5, 20 kg
KCH powder 51	25 kg

Storage

The products shall be stored in a cool and dry place. With a storage temperature of 23°C the minimum shelf life is as follows:

KCH EP solution 2	12 months
KCH EP solution 7	12 months
KCH EP hardener 6	12 months
KCH powder 51	24 months

Higher temperatures will shorten the shelf-life of this products. The packaging drums are to be kept tightly shut and are to be resealed each time material has been removed. All liquid products are to be stored frost-free.

Safety

Adequate ventilation shall be provided during the execution of all work. Ventilation is compulsory for all work carried out in pits and closed rooms.

All vapours that are produced during processing must be continuously suctioned off at floor or bottom level.

Only such amount of material effectively required to continue work is to be stored at the working place. The instructions for the prevention of fire and explosion are to be observed if required.

Please note and ensure that even smallest quantities of the individual components and/or prepared mixtures are not allowed to reach the sewerage.

All regulations for the prevention of accidents stipulated by the employer's liability assurance association, the regulations for the prevention of accidents prescribed at the site of application and the TRGS 507 „Surface treatment in rooms and tanks“, as well as the safety precautions listed on the packing (label) required by the provisions of the Hazardous Materials Ordinance shall be adhered to. The operating instructions pursuant to § 14 GefStoffV as well as the EC safety data sheets are to be complied with.

Technical data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	g/cm ³	1.3
Tensile strength	DIN EN ISO 527	MPa	20
Elongation at tear	DIN EN ISO 527	%	1.85
Modulus of elasticity (tensile test)	DIN EN ISO 527	MPa	3,500
Flexural strength	DIN EN ISO 178	MPa	25
Compressive strength	DIN EN ISO 604	MPa	65
Adhesive strength at steel	DIN EN 24624	MPa	> 7
Adhesive strength at concrete/screed ¹⁾	DIN EN 24624	MPa	> inherent strength
Hardness	DIN 53505	Shore D	80
Dissipation Resistivity (to earth)	DIN EN ISO 1081	Ω	> 10 ⁹
Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	65 · 10 ⁻⁶
Maximum operating temperature		°C	80

¹⁾ Compressive strength 25 MPa

The technical data contained herein represents the current state of our product knowledge and is intended to furnish general information regarding our products and their application spectrum. In view of the diversity and multitude of application possibilities, this data should be regarded solely as general information, which does not guarantee any specific properties and/or suitability of these products for each concrete case of application. Consequently, when ordering a product, please contact us for detailed information relative to the properties required for a specific application. Our technical service will, upon request, furnish a profile of characteristics for the concrete application without delay.

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