

Technical Data Sheet

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® KORROPLAST EP 313 Flakeline

Synthetic resin coating for steel and concrete surfaces

Description

KORROPLAST EP 313 Flakeline is a synthetic resin coating based on epoxy resins that is applied by means of the airless spray method. The applied film thickness measures approx. 0.5 mm. Variations are possible depending on the stress conditions encountered.

Typical uses

KORROPLAST EP 313 Flakeline is recommended as a surface protection system for structural components made of steel and/or concrete that are exposed to corrosive media.

The primary fields of application include wall surfaces, channels, pits and tanks in chemical process plants as well as in other industrial sectors.

Properties

KORROPLAST EP 313 Flakeline exhibits an excellent chemical resistance against alkaline solutions, acids and saline solutions. An outstanding feature of the coating is its superior adhesion to steel and concrete.

Chemical resistance

Information regarding the chemical resistance properties is available upon request.

Substrate

Structural components made of steel and/or concrete may serve as substrate. All concrete components to be coated must meet the requirements contained in DIN EN 14879-1.

Steel structures must meet the requirements of DIN EN 14879-1.

Surface pre-treatment

Steel: Steel surfaces must be abrasive blasted to a metallic white finish. A preparation degree of SA 2½ as specified in DIN EN ISO 12944-4 and a "medium (G)" roughness degree as specified in ISO 8503-1 must be attained; minimum roughness Rz = 70 µm. The steel surface must be primed after blast cleaning.

Concrete: If required, the concrete surface must be prepared by abrasive blasting or other suitable mechanical methods to remove cement slurries,

cement skin, loose or brittle particles, defects and parting compounds.

The residual moisture of the concrete surface must be < 4%.

Application

KORROPLAST EP 313 Flakeline consists of a two-component primer and a two-component top coat.

| Mixing ratios | Parts by weight (kg) | Parts by volume (l) |
|-------------------------------|----------------------|---------------------|
| <u>KCH EP Primer 12</u> | | |
| Component A | 100 | 2.00 |
| Component B | 60 | 1.30 |
| <u>Trowel Coat (concrete)</u> | | |
| KCH EP Primer 12 | 100 | 2.00 |
| Component A | | |
| KCH EP Primer 12 | 60 | 1.30 |
| Component B | | |
| KCH Powder 17 | 260 | 6.50 |
| <u>KORROPLAST EP 313</u> | | |
| <u>Flakeline</u> | | |
| Component A | 100 | 2.00 |
| Component B | 12.5 | 0.30 |

Steel and concrete surfaces must be primed following the surface preparation. For concrete substrates, an additional trowel-applied coat of approx. 1 mm must be applied. The top coat is then applied in 2 spray applications of 0.25 mm each. The total film thickness must measure approx. 0.5 mm on steel and approx. 1.5 mm on concrete.

Pot life

| Temp. | Primer | Trowel Coat | Top Coat |
|-------|---------------|---------------|---------------|
| 15°C | approx.45 min | approx.40 min | approx.80 min |
| 20°C | approx.30 min | approx.30 min | approx.60 min |
| 30°C | approx.20 min | approx.20 min | approx.20 min |

Consumption

Primer approx. 30 kg/m²
 Trowel Coat: approx. 1.40 kg/m² per mm
 Top Coat (0.5 mm, 2 coats): approx. 0.60 kg/m²

Packing

The products are shipped in the following standard packing units:

| | |
|-------------------------------------|---------|
| KCH EP Primer 12 Comp. A | 12.5 kg |
| KCH EP Primer 12 Comp. B | 7.5 kg |
| KORROPLAST EP 313 Flakeline Comp. A | 20 kg |
| KORROPLAST EP 313 Flakeline Comp. B | 2.5 kg |
| KCH Powder 17 | 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 Primer 12 Comp. A | 12 months |
| KCH EP Primer 12 Comp. B | 12 months |
| KORROPLAST EP 313 Flakeline Comp. A | 12 months |
| KORROPLAST EP 313 Flakeline Comp. B | 12 months |
| KCH Powder 17 | 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 standard | Unit | Parameter |
|-------------------------------------------|-------------------|-------------------|------------------------------|
| Density | DIN EN ISO 1183-1 | g/cm ³ | 1.2 |
| Tensile strength | DIN EN ISO 527 | MPa | 28 |
| Elongation at tear | DIN EN ISO 527 | % | 1.4 |
| Modulus of elasticity (tensile test) | DIN EN ISO 527 | MPa | 2.500 |
| Adhesion to steel | DIN EN 24624 | MPa | > 5 |
| Adhesion to concrete/screed ^{*)} | DIN EN 24624 | MPa | > inherent strength |
| Hardness | DIN 53505 | Shore D | 80 |
| Leakage resistance to earth | DIN EN ISO 1081 | Ω | >10 ⁹ |
| Coefficient of linear thermal expansion | DIN 53752 | K ⁻¹ | 76 · 10 ⁻⁶ (60°C) |
| Maximum service temperature | | °C | 90 |

^{*)} 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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