

Technical Data Sheet

33.06.512E – 06/06

® KORROPLAST FU 511

Glass fibre reinforced synthetic resin coating for steel substrates exposed to severe chemical and thermal stress

Description

KORROPLAST FU 511 is a coating material based on furan resin reinforced by glass mats. The layer thickness comes up to approx. 3 mm.

Typical uses

KORROPLAST FU 511 is suited to protect the surfaces of steel components exposed to aggressive chemicals.

KORROPLAST FU 511 is predominantly used as sealing layer under acid-proof brick linings. It is further used as coating material in tanks and apparatuses of the chemical industry and in plant components of other industrial branches exposed to severe chemical stress.

Properties

KORROPLAST FU 511 offers good mechanical properties and is highly resistant to acids, lyes, brines and organic solvents. Furthermore the coating stands out for its excellent resistance to high temperatures.

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

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 $R_z = 70 \mu\text{m}$. A primer shall be applied subsequent to sandblasting.

Application

KORROPLAST FU 511 consists of a two-component Primer and a three-component Laminate Coat, in which two KCH mats 300 and one KCH fleece 30 are inserted.

Mixing ratios	Parts by weight (kg)	Parts by volume (l)
<u>Primer</u>		
KCH VE solution 17	100	2.00
KCH UP hardener 1	2	0.04
<u>Laminate Coat</u>		
a) Filler solution		
KCH FU solution 1	100	2.00
KCH FU hardener 1	2	0.03
KCH FU powder 9	300	5.10
b) Laminating solution		
KCH FU solution 1	100	2.00
KCH FU hardener 1	2	0.03
KCH FU powder 9	125	2.10

Apply the Primer and allow to harden. Apply Primer a second time and sand it using KCH powder 6. Spread the filler solution approx. 1 mm thick on the completely cured priming coat. Insert one KCH mat 300, soak it with laminating solution and laminate avoiding the formation of blisters.

After a curing time of 12 - 24 hours apply a second layer with filler solution and laminate the second KCH mat 300 onto it. Lay the KCH fleece 30 on the freshly laminated (and not yet fully hardened) coat, soak it with laminating solution and roll it firmly onto the laminating coat.

Depending on the requirement two KCH mats 450 may also be used instead of the KCH mats 300.

Pot life

Temperature	Primer	Filler / Laminate Solution
15°C	~ 30 min.	~ 25 min.
20°C	~ 25 min.	~ 20 min.
30°C	~ 12 min.	~ 10 min.

Coverage

Primer: (two applications) approx. 0.6 kg/m²
(KCH powder 6) approx. 0.8 kg/m²

Filler solution (1 mm): approx. 1.7 kg/m²

Laminating solution:
(2 KCH mats 300) approx. 2.0 kg/m²
(2 KCH mats 450) approx. 2.8 kg/m²

Packing

The following standard quantities are available:

KCH VE solution 17	20 kg
KCH UP hardener 1	0.4 kg
KCH powder 6	25 kg
KCH FU solution 1	20, 60, 200 kg
KCH FU hardener 1	10 kg
KCH FU powder 9	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 VE solution 17	6 months
KCH VE solution 17 < 15 °C	9 months
KCH UP hardener 1	6 months
KCH powder 6	24 months
KCH FU solution 1	24 months
KCH FU hardener 1	12 months
KCH FU powder 9	24 months
KCH mat 300	24 months
KCH mat 450	24 months
KCH fleece 30	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	1.7
Tensile strength ^{*)}	DIN EN ISO 527	MPa	25
Elongation at tear ^{*)}	DIN EN ISO 527	%	1.0
Modulus of elasticity (tensile test) ^{*)}	DIN EN ISO 527	MPa	6,500
Adhesive strength at steel	DIN EN 24624	MPa	> 4
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	35 · 10 ⁻⁶
Maximum operating temperature		°C	120

^{*)} The values are applicable to the laminate coat.

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.

KCH GROUP GmbH

P.O. Box 11 63, D-56425 Siershahn

Phone: +49 (0) 2623-600-0 / Fax: +49 (0) 2623-600-433 / eMail: info@kch-group.com

تلفن: ۰۴-۲۲۶۴۶۷۸۳ و ۰۱-۲۲۶۳۰۶۰۸

شرکت کسری نماینده رسمی KCH آلمان