Technical Data Sheet

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® KORROPLAST VE 410

Synthetic resin coating for steel surfaces subjected to high chemical and thermal stress

Description
KORROPLAST VE 410 is a synthetic resin coating based on vinyl ester resin containing glass flakes as barrier fillers. It is applied by means of rolling or spreading. The standard layer thickness measures approx. 1.2 mm. Depending on the extent of stress deviations hereof may be permitted.

Typical uses
KORROPLAST VE 410 is recommended as surface protection for structural steel components that are subjected to attack by corrosive substances also at higher temperature ranges.
The primary spectrum of application is for conduits, chimneys and heat exchangers in the flue gas desulfurization plants of power stations as well as waste gas and/or flue gas purification systems in the chemical industry and other industrial sectors. This Spreading Compound is particularly well suited for the coating of narrow, close fitting components having a complex structure.

Properties
KORROPLAST VE 410 exhibits exceptionally good chemical resistance properties, an excellent thermal stability and insensitivity to thermal shock stress as well as a superior diffusion impermeability. The diffusion impermeability of the coating is further improved by the proportion of glass flakes (thickness 3 - 5 µm, diameter ≤ 0,4 mm).

Chemical resistance
Information on the chemical resistance properties will be provided on request.

Substrate
All steel structures and structural components are required to comply with the specifications contained in 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 µm. A primer shall be applied subsequent to sandblasting.

Application
KORROPLAST VE 410 is composed of a two-component Primer and several two-component Spreading Compound layers applied in the colour sequence grey and red.

Mixing ratios	**Parts by weight (kg)**	**Parts by volume (l)**
Primer		
KCH VE solution 3	100	2.00
KCH UP hardener 1	2	0.04
Spreading Comp. layers		
Laminating solution		
KCH VE solution 11 (grey or red)	100	2.00
KCH UP hardener 1	1.5	0.03

The Primer and the Spreading Compound layers are applied by means of rolling or spreading . The layer thickness per individual application should measure approx. 0.15 mm. The total layer thickness should add up to approx. 1.2 mm.

Pot life

Temperature	Primer	Spreading Compound layers
15 °C	~ 30 min.	~ 60 min.
20 °C	~ 25 min.	~ 45 min.
30 °C	~ 12 min.	~ 20 min.

Coverage
Primer: approx. 0.35 kg/m²
Covering Layer: approx. 2.5 kg/m²
(thickness: approx. 1.2 mm)

Packing
The following standard quantities are available:
KCH VE solution 3 20 kg
KCH VE solution 11 20 kg
KCH UP hardener 1 0.3, 0.4 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 3	3 months
KCH VE solution 3 < 15 °C	6 months
KCH VE solution 11	3 months
KCH VE solution 11 < 15 °C	6 months
KCH UP hardener 1	6 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/cm³	1.4
Tensile strength	DIN EN ISO 527	MPa	40
Elongation at tear	DIN EN ISO 527	%	0.5
E-module (tensile test)	DIN EN ISO 527	MPa	7000
Flexural strength	DIN EN ISO 178	MPa	60
Compressive strength	DIN EN ISO 604	MPa	80
Adhesiveness to steel	DIN EN 24624	MPa	> 5
Barcol-hardness	DIN EN 59		> 35
Dissipation Resistivity (to ground)	DIN EN ISO 1081	Ω	$> 10^9$
Linear thermal expansion coefficient	DIN 53752	K^{-1}	$20 \cdot 10^{-6}$
Max. operational temperature		°C	200

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