

HEGSEL® Flake 710

Glass Flake Filled Novolac Vinyl Ester Resin

You Build, We Protect!

Description:

HEGSEL Flake 710 is a two-component; vapour diffusion resistant, inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **HEGSEL Flake 710** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide an excellent diffusion barrier and thus ensure a long service life.

Characteristics:

- High temperature stability up to +180°C
- Excellent permeation resistance
- Excellent chemical resistance to inorganic and organic acids, alkalines and organic solvents
- Application by spraying, brushing or rolling
- Can be exposed to process conditions shortly after application
- Outstanding adhesion to steel

Applications:

HEGSEL Flake 710 is used mainly in raw gas and clean gas ducts, heat exchangers, flue gas scrubbers, wet electric filters, stacks and gas pre-heaters of flue gas desulphurization plants. Furthermore, it is also used in other plant components which are exposed to acid fumes and gases. **HEGSEL Flake 710** is also suitable as corrosion protection for storage and process tanks, wastewater treatment plants, stack gas scrubbers, waste incineration plants and biogas plants.

Application Data:

Coating Layers		The coating system includes a two-component HEGSEL Flake 710 Primer and 2-3 coats of HEGSEL Flake 710 Topcoat , each 500-700 µm thick, in alternating beige and pink. The total thickness can reach up to 2.5 mm, depending on chemical and thermal loads.				
Mixing Ratio	Primer	HEGSEL Flake 710 Primer	Part by weight	A : B = 100 : 2		
		HEGSEL Flake 710 Hardener				Part by volume
	Coating	HEGSEL Flake 710 Solution	Part by weight	A : B = 100 : 2		
		HEGSEL Flake 710 Hardener				Part by volume
@Temperature			15°C	20°C	30°C	
Pot Life (Approx.)		HEGSEL Flake 710 Primer		60 min	40 min	20 min
		HEGSEL Flake 710 Coating		90 min	60 min	30 min
			Thickness (µm)		Coverage (g/m²)	
Consumption per Coat		HEGSEL Flake 710 Primer		Covering		Approx. 150
		HEGSEL Flake 710 Coating		Approx. 500 - 700		Approx. 900 - 1100
Recoat Time (20°C)		HEGSEL Flake 710 Primer		Min. 6 hrs.	Max. 7 days	
		HEGSEL Flake 710 Coating		Min. 4 hrs.	Max. 3 days	

Note: The information about coverage is an average for spray applications. Actual coverage depends on the object geometry and the method of application. It can vary.

Packaging:

The products are supplied in the following standard package sizes:

Product	Size
HEGSEL Flake 710 Solution	5 kg
HEGSEL Flake 710 Solution	20 kg
HEGSEL Flake 710 Primer	5 kg
HEGSEL Flake 710 Primer	20 kg
HEGSEL Flake 710 Hardener	0.1 kg
HEGSEL Flake 710 Hardener	0.4 kg
Cleaner S15	4 kg
Cleaner E-200	4 kg
Cleaner E-200	8 kg

1. Surface Preparation

Substrates are steel components, and shall be designed and manufactured in accordance with EN 14879-1.

Surfaces to be coated must be clean dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN TR 55684 and EN ISO 8502.

Non-alloyed steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A standard preparation degree of SA 2½ (SSPC SP-10; NACE #2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-2 must be achieved. A minimum surface profile of Rz ≥ 70 microns is required. To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned to a relative humidity of ≤ 40%.

2. Environmental Conditions

Throughout the coating process, the temperatures of the substrate and coating materials shall be maintained within the range specified by HEGGEL. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

3. Application

During the application of the product, the application instruction must always be observed. **HEGGEL Flake 710 PRIMER** and each **HEGGEL Flake 710** topcoat are applied using an airless air spray system or by rolling or brushing. In case **HEGGEL Flake 710** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT. Grinded surfaces must generally be cleaned with SOLVENT F12.

Note: During application, the lined surface should be shaded from direct or indirect sunlight whenever possible.

4. Mixing

The primer and coating components are supplied in premeasured units so that weighing or measuring of the components is kept to a minimum. After the unit has been mixed it shall be used within the specified pot life.

5. Chemical Resistance

Information on the chemical request is available on request.

6. Cleaning

Clean all equipment with or **Cleaner E-200** immediately after use. Frequency of cleaning will depend upon amount applied, temperature and elapsed time, including any delays.

7. Safety Measures

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

Technical Data

Title	Standard	Value	Unit
Abrasion	ASTM D4060	90	mg
Density (A+B)	EN ISO 2811 (ASTM D1475)	1.19 ± 0.03	g/cm ³
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	3500 ± 500	N/mm ²
Hardness Barcol	EN 59 (ASTM D2583)	≥ 35	-
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	7	N/mm ²
Test Voltage (earliest after 24 hours)	EN 14879-2	0.5	kV/100µm DFT
Viscosity	EN ISO 2555 (ASTM D2196)	3000 ± 250	mPa.s
Tensile Strength	EN ISO 527 (ASTM D638)	20	N/mm ²
Max. Operating Temperature Liquids	-	+75	°C
Max. Operating Temperature Dry (Flue Gas)	-	+180	°C
Short-term Operating Temperature Dry (Flue Gas)	-	+220	°C

Note: The indicated temperatures are dependent on the present load and may vary

Storage

The products must be stored in a cool and dry place, away from direct sunlight. At the specified storage temperatures, a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
HEGGEL Flake 710 Solution	≤ +10°C	9 Months
	≤ +20°C	6 Months
HEGGEL Flake 710 Primer	≤ +10°C	9 Months
	≤ +20°C	6 Months
HEGGEL Flake 710 Hardener	5-20°C	12 Months
Cleaner S15	5-20°C	12 Months
Cleaner E-200	5-25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

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All information contained herein is based on the current state of our knowledge and practical experience at the time of release. Therefore, please make sure that this is the latest edition of the Technical Data Sheet. All data are only intended as a guideline for informational purposes and do not constitute a legally-binding warranty of the suitability for a certain purpose of use, due to its dependence on site conditions and possible processing, use and applications. All information contained in this technical datasheet is subject to change without notice.

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