HEGGEL Flake 710

2-C- C-glass flake filled polymer coating

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Description:

HEGGEL Flake 710 is a two-component; vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. The C-glass flake fillers are oriented parallel to the substrate surface to form a high level of protection against permeation and ensure a long service life.

Characteristics:

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

Applications:

HEGGEL Flake 710 is used mainly in flue gas ducts, heat exchangers, stacks and gas pre-heaters of flue gas desulphurization plants. Furthermore it is also used successfully in other process plants Information on the chemical request is available on request.

Coating layers consumption:

The coating system consists of the two-component **HEGGEL Flake 710 PRIMER** and at least two, generally three coats of the two-component **HEGGEL Flake 710** topcoat applied at approx. 400 - 600 µm DFT per coat, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.0 mm.

Chemical resistance:

Information on the chemical request is available on request.

Substrate:

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

Pot life (20°c) / Working time (min):

Product	15°C	20°C	30°C
HEGGEL Flake 710 PRIMER	ca. 60	ca. 40	ca. 20
HEGGEL Flake 710	ca. 90	ca. 60	ca. 30

Packaging:

The products are supplied in the following standard package sizes:

Product	Size
HEGGEL Flake 710	5 kg
HEGGEL Flake 710	20 kg
HEGGEL Flake 710 PRIMER	5 kg
HEGGEL Flake 710 PRIMER	20 kg
HEGGEL HR 910	0.1 kg
HEGGEL HR 910	0.4 kg
HEGGEL HR 910 RED	0.1 kg
HEGGEL HR 910 RED	0.4 kg
HEGGEL Flake 710 UNI	8.4 kg

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	≤ +20°C	5 Months
HEGGEL Flake 710 PRIMER	≤ +20°C	6 Months
HEGGEL HR 910	≤ +20°C	12 Months
HEGGEL HR 910 RED	≤ +20°C	12 Months
HEGGEL Flake 710 UNI	≤ +20°C	24 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.

1. Surface preparation

Surfaces to be coated must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN Fachbericht # 28 and EN ISO 8502.

Ferrite 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 8503-1 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.

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.

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.

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

4. Mixing ratio

The primer and coating components are supplied in pre-measured 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.

PRIMER	Parts by Weight	Parts by Volume
HEGGEL Flake 710 PRIMER	100	100
HEGGEL HR 910	2	2.11

COATING	Parts by Weight	Parts by Volume
HEGGEL Flake 710	100	100
HEGGEL HR 910	2	2.32

5. Consumption per coat

PRODUCT	THICKNESS (µm)	COVERAGE (G/m²)
HEGGEL Flake 710 PRIMER	covering	ca. 150
HEGGEL Flake 710	ca. 400 - 600	Ca.800 - 1000

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.

6. Pot life / Working time (min)

PRODUCT	15°C	20°C	30°C
HEGGEL Flake 710 PRIMER	ca. 60	ca. 40	ca. 20
HEGGEL Flake 710	ca. 90	ca. 60	ca. 30

7. Recoat time (20°C)

PRODUCT	Min. (h)	Max. (Days)
HEGGEL Flake 710 PRIMER	ca. 6	ca. 7
HEGGEL Flake 710	ca. 4	ca. 3

8. Cleaning

Clean all equipment with or **HEGGEL Flake 710 CLE** immediately after use. The cleaning is done while the material is still not hardened.

9. 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	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm³	1.20±0.04
Hardness Barcol	EN 59 (ASTM D2583)	-	35
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm²	7
Test Voltage (earliest after 24 hours)	EN 14879-2	kV/100µm DFT	0.5
Viscosity	EN ISO 2555	mPa.s	2550±250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30×10^{-6}
Water Vapour Permeability	ASTM E-96; Method E	perm-inch	0.001
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm²	40
Max. Operating Temperature Liquids		°C	+70
Max. Operating Temperature Dry (Flue Gas)		°C	+180
Short-term Operating Temperature Dry (Flue Gas)		°C	+200

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

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