PRODUCT INFORMATION
COROFLAKE 23 T

PRODUCT DESCRIPTION
COROFLAKE 23 T is a two-component; inert flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **COROFLAKE 23 T** can be applied in layer thicknesses up to 1000 µm per coat.
COROFLAKE 23 T is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. The parallel to the substrate oriented inert flakes provide a diffusion barrier and thus ensure a long service life.

COATING LAYERS CONSUMPTION
The coating system consists of the two-component **COROFLAKE S PRIMER** and at least one, generally two coats of the two-component **COROFLAKE 23 T** topcoat applied at approx. 800 - 1000 µm DFT per coat. Depending on the present load, **COROFLAKE 23 T** is applied in one or several coats, alternating in beige and pink colours. The total applied DFT is based on the chemical and thermal load present and can be up to 2.5 mm.

FIELDS OF APPLICATION
COROFLAKE 23 T is used mainly in flue gas ducts, gas gas heaters, residue collecting tanks and stacks of flue gas desulphurisation plants (FGD). Further fields of application are biogas plants, wastewater treatment plants as well as other structural components servicing under corrosive conditions.

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

CHEMICAL RESISTANCE
Information on the chemical resistance properties is available upon request.

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

SURFACE PRE-TREATMENT
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 surface preparation degree of SA 2½ (SSPC-SP 10; NACE No. 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 $R_z \geq 70$ µm 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%.

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

APPLICATION
During the application of the product, the application instruction must always be observed.
COROFLAKE S PRIMER and each **COROFLAKE 23 T** topcoat are applied to the substrate using an airless air spray system. 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.

MIXING RATIO
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.

Primer	Parts by Weight	Parts by Volume
COROFLAKE S PRIMER	100	100
HARDENER No. 1 CLEAR	2	2.1

Coating	Parts by Weight	Parts by Volume
COROFLAKE 23 T	100	100
HARDENER No. 1 CLEAR / RED	2	2.3

CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
COROFLAKE S PRIMER	covering	ca. 150
COROFLAKE 23 T	ca. 800 - 1000	ca. 1500 - 1700

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.

POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
COROFLAKE S PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE 23 T	ca. 90	ca. 60	ca. 30

RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE S PRIMER	ca. 6	ca. 7
COROFLAKE 23 T	ca. 4	ca. 3

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

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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.

PACKING UNITS
The products are supplied in the following standard package sizes:

Product	Size	Article No.
COROFLAKE 23 T	20 kg	590 0060
COROFLAKE S PRIMER	5 kg	590 0167
COROFLAKE S PRIMER	20 kg	590 0033
HARDENER No. 1 CLEAR	0.1 kg	590 0181
HARDENER No. 1 CLEAR	0.4 kg	590 0019
HARDENER No. 1 RED	0.1 kg	590 0356
HARDENER No. 1 RED	0.4 kg	590 0112
SOLVENT F12	4 kg	590 0095
SOLVENT T-200	4 kg	590 0610
SOLVENT T-200	8 kg	590 0611

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
COROFLAKE 23 T	5 - 20°C	6 Months
COROFLAKE S PRIMER	≤ 10°C	9 Months
	≤ 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
HARDENER No. 1 RED	5 - 20°C	12 Months
SOLVENT F12	5 - 20°C	12 Months
SOLVENT T-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.

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	95
Density (Mixture)	EN ISO 2811 (ASTM D1475)	g/cm³	1.19 ± 0.03
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm²	3500 ± 500
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 (ASTM D2196)	mPa·s	3250 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	27-30 x 10^{-6}
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm²	19
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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