

PRODUCT INFORMATION

COROFLAKE 18

PRODUCT DESCRIPTION

COROFLAKE 18 is a two-component, vapour diffusion resistant, C-glass flake filled polymer coating based on a chemical and thermal resistant Novolac vinyl ester resin. **COROFLAKE 18** is the ideal corrosion protection if high chemical resistance is required at high medium temperatures. Furthermore, **COROFLAKE 18** is characterized by its good abrasion resistance. The parallel to the substrate oriented C-glass flakes provide an excellent 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 two coats of the two-component **COROFLAKE 18** topcoat applied by trowel at a target thickness of approx. 1000 µm DFT per coat. The total applied DFT is based on the chemical and thermal load present and can be up to 3.0 mm

FIELDS OF APPLICATION

Typical applications of **COROFLAKE 18** are high loaded components and tanks in process plants in the chemical industry, dye industry and flue gas desulphurisation plants.

FEATURES

- High dry temperature stability
- Excellent permeation resistance
- Excellent chemical resistance to inorganic and organic acids, aliphatic and aromatic solvents as well as diluted lye
- Outstanding adhesion to steel
- Good abrasion resistance
- Application by trowelling

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 $R_z \geq 70 \mu\text{m}$ 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 $\leq 40\%$.

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.

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 is applied to the substrate using an airless air spray system or by rolling. Thereafter the two **COROFLAKE 18** coats shall be trowel applied. The surface of the lining must be smoothed with a roller dampened with **SOLVENT F12**. Special applications may require additional sealing (**COROFLAKE 18** sealing). The sealing is applied as uniform as possible in a target thickness of approx. 100 µm using a mohair roller.

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 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
COROFLAKE S PRIMER	100	100
HARDENER No. 1 CLEAR	2	2.1

Coating	Parts by Weight	Parts by Volume
COROFLAKE 18	100	100
HARDENER No. 1 CLEAR	2	2.3
PIGMENT SOLUTION P1 (2 nd topcoat)	0.5	0.6

CONSUMPTION PER COAT

Product	Thickness [µm]	Coverage [g/m²]
COROFLAKE S PRIMER	covering	ca. 150
COROFLAKE 18	ca. 800 - 1000	ca. 1500 - 1700

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

COROFLAKE 18

POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
COROFLAKE S PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE 18	ca. 90	ca. 60	ca. 30

RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE S PRIMER	ca. 6	ca. 7
COROFLAKE 18	ca. 12	ca. 3

CLEANING

Clean all equipment with **SOLVENT T-200** immediately after use.

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 18	5 kg	590 0507
COROFLAKE 18	20 kg	590 0150
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
PIGMENT SOLUTION P1	0.1 kg	590 0844

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	68
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm ²	6500 ± 1500
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 30
Min. Adhesion Strength Steel	EN ISO 4624 (ASTM D4541)	N/mm ²	4
Test Voltage (earliest after 24 hours)	EN 14879-2	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	4750 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 ⁻⁶
Tensile Strength	EN ISO 527 (ASTM D638)	N/mm ²	30
Max. Operating Temperature Liquids	-	°C	+90
Max. Operating Temperature Dry (Flue Gas)	-	°C	+160

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

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

TIP TOP Oberflächenschutz Elbe GmbH | Heuweg 4 | 06886 Wittenberg / Germany
 Phone: +49 (0) 3491 635 50 | E-Mail: info@tiptop-elbe.de | Internet: www.tiptop-elbe.com

TIP TOP Oberflächenschutz Elbe GmbH	COROFLAKE 18	Revision 1.03 - 11.03.2021
Replaces all previous editions	PRODUCT INFORMATION	Page: 2/2

Product	Size	Article No.
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 18	5 - 20°C	3 Months
COROFLAKE S PRIMER	≤ 10°C	9 Months
	≤ 20°C	6 Months
HARDENER No. 1 CLEAR	5 - 20°C	12 Months
PIGMENT SOLUTION P1	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.