



PRODUCT INFORMATION

COROFLAKE 18

PRODUCT DESCRIPTION

COROFLAKE 18 is a two-component, vapour diffusion resistant polymer coating filled with C-glass flakes based on a chemically and thermally highly resistant Novolac vinyl ester resin. **COROFLAKE 18** is the ideal corrosion protection when high chemical resistance at high media temperatures is required.

Furthermore, **COROFLAKE 18** is also characterised by its good abrasion resistance. The C-glass flakes orientated parallel to the substrate form an excellent diffusion barrier and thus provide a long service life.

COATING BUILD-UP

The coating system consists of the two-component primer **COROFLAKE S PRIMER** and at least two coats of **COROFLAKE 18**, each with a dry film thickness of approx. 800 - 1000 µm. The total dry film thickness to be applied depends on the existing chemical and thermal stress and can be up to 3.0 mm.

FIELDS OF APPLICATION

Typical areas of application for **COROFLAKE 18** are highly stressed plant components and vessels in process plants in the chemical industry, dye industry and in flue gas cleaning plants. **COROFLAKE 18** is also used for bonding GRP sleeves in nozzles.

FEATURES

- High temperature resistance
- Extremely low water vapour permeability
- Excellent chemical resistance to organic and inorganic acids, aliphatic and aromatic solvents and diluted bases or alkalis
- Excellent adhesion to steel
- Good abrasion resistance
- Application by trowel

CHEMICAL RESISTANCE

Requests for chemical resistance can be sent to awt@tiptop-elbe.de.

SUBSTRATE

Substrates are components made of non-ferrous metals, cast materials, unalloyed or austenitic steel. The components must be designed and manufactured in accordance with EN 14879-1. The substrate must remain dry during application.

SURFACE PRE-TREATMENT

EN14879-1 and the TIP TOP specification "Corrosion protection of metallic components" must be observed. Unalloyed steel must be blasted to "Near White Metal" in accordance with EN ISO 12944-4. A surface preparation degree of SA 2½ according EN ISO 8501-1 and a roughness degree "Medium (G)" according EN ISO 8503-2 must be achieved. A minimum roughness depth of $Rz \geq 70 \mu\text{m}$ is required. After blasting, the formation of new rust should be prevented by suitable measures (e.g. priming).

CLIMATIC CONDITIONS

During application, direct or indirect sunlight must be avoided and the climatic conditions specified in the application instruction must be observed. To avoid condensation, a dew point difference of at least 3K must be maintained. During application, the materials must never be colder than the ambient temperature at the workplace.

MIXING RATIO

The primer and coating materials are delivered to the construction site in mixing units so that there is no need to weigh or measure the individual components. After mixing a unit, it must be applied within the specified pot life.

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

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MIXING RATIO

Coating / topcoat	Weight parts	Volume parts
COROFLAKE 18	100	100
HARDENER No. 1 CLEAR	2	2.3
PIGMENT SOLUTION P1 (2nd. layer)	0,5	0.6

APPLICATION METHOD | CONSUMPTION

Always observe the current application instruction before using the products. During coating work, direct or indirect sunlight must be avoided absolutely. An additional sealer (**COROFLAKE 18** sealer) may be required for special applications. The sealer is applied with a mohair roller as evenly as possible in a layer thickness of approx. 100 µm on the last top coat. Ground surfaces must be generally cleaned with **SOLVENT F12**.

Product	Application	Thickness	Consumption
COROFLAKE S PRIMER	Roll / brush / airless spray	covering	ca. 150 g/m ²
COROFLAKE 18	Trowel	800 - 1000 µm	ca. 1500 - 1700 g/m ²

The consumption indicated is an average value. The actual consumption depends on the object geometry and the application method. It can therefore vary.

POT LIFE | RECOAT TIME

Product	Working time			Recoat time (20°C)	
	15°C	20°C	30°C	Min.	Max.
COROFLAKE S PRIMER	60 min	40 min	20 min	6 h	7 d
COROFLAKE 18	90 min	60 min	30 min	12 h	3 d

CLEANING

All equipment should be cleaned with **SOLVENT T-200** immediately after use. The equipment should be cleaned in a well-ventilated area. It is recommended to flush the spraying equipment several times during the working day. The frequency of cleaning depends on the spray volume, temperature and elapsed time, including possible delays.

SPARK TEST

The spark test is carried out in accordance with EN 14879-2 using a high-voltage tester. The previously measured average dry film thickness is the basis for the test voltage. The test is carried out at the earliest 24 hours after finishing the top coat at a curing temperature of +20°C.

Product	Test voltage
COROFLAKE 18	0,5 kV / 100 µm DFT

DELIVERY FORM | MINIMUM SHELF LIFE

Product	Packaging	Article No.	Storage temperature	Min. shelf life
COROFLAKE 18	5 kg	590 0507	5 - 20°C	3 Mon
COROFLAKE 18	20 kg	590 0150	5 - 20°C	3 Mon
COROFLAKE S PRIMER	5 kg	590 0167	≤ +10°C ≤ +20°C	9 Mon 6 Mon
COROFLAKE S PRIMER	20 kg	590 0033	≤ +10°C ≤ +20°C	9 Mon 6 Mon
HARDENER No. 1 CLEAR	0.1 kg	590 0181	5 - 20°C	12 Mon
HARDENER No. 1 CLEAR	0.4 kg	590 0019	5 - 20°C	12 Mon
PIGMENT SOLUTION P1	0.1 kg	590 0844	5 - 20°C	12 Mon
SOLVENT F12	4 kg	590 0095	5 - 20°C	12 Mon

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DELIVERY FORM | MINIMUM SHELF LIFE

Product	Packaging	Article No.	Storage temperature	Min. shelf life
SOLVENT T-200	4 kg	590 0610	5 - 25°C	60 Mon
SOLVENT T-200	8 kg	590 0611	5 - 25°C	60 Mon

SAFETY MEASURES

The safety data sheets for the individual components and the legal regulations for handling hazardous substances must be observed. The prescribed personal protective equipment must be worn. Information on disposal can be found in the safety data sheets for the individual products. The safety data sheets can be downloaded from our homepage in the download area.

PHYSICAL DATA

Properties	Standard	Unit	Value
Abrasion	ASTM D4060	mg	68
Adhesive strength steel	EN ISO 4624 (ASTM D4541)	N/mm ²	≥ 4
Barcol hardness	EN 59 (ASTM D2583)	Barcol	≥ 30
Linear coefficient of thermal expansion	ISO 11359-2 (ASTM C531)	K ⁻¹	25 - 30 x 10 ⁻⁶
Max. Temperature dry (flue gases)	-	°C	+160
Max. Temperature for liquids	-	°C	+90
Modulus of elasticity (bending test)	EN ISO 178 (ASTM D790)	N/mm ²	6500 ± 1500
Polymer base	-	-	Vinyl ester
Tensile strength	EN ISO 527 (ASTM D638)	N/mm ²	30
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	4750 ± 250

The specified temperatures depend on the existing load and can therefore 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.