



## PRODUCT INFORMATION

### COROFLAKE 24

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#### PRODUCT DESCRIPTION

**COROFLAKE 24** is a two-component, vapour diffusion resistant polymer coating filled with inert flakes based on a chemically highly resistant Bisphenol-A vinyl ester resin, which was designed especially for flue gas desulphurisation plants. The inert flakes orientated parallel to the substrate form an excellent diffusion barrier and thus provide a long service life.

#### COATING BUILD-UP

The coating consists of the two-component primer **COROFLAKE N PRIMER** and at least two, usually three coats of the two-component topcoat **COROFLAKE 24**, each with a dry film thickness of approx. 500 - 700 µm, alternating in the colours beige and pink. The total dry film thickness to be applied depends on the existing chemical and thermal stress and can be up to 2.5 mm.

#### FIELDS OF APPLICATION

**COROFLAKE 24** is mainly used in clean gas ducts, flue gas scrubbers and tanks of flue gas desulphurisation plants as well as for cooling water and seawater pipes.

**COROFLAKE 24** is also suitable as corrosion protection for process tanks, waste water plants and biogas plants as well as base coat for **COROFLAKE 24 AR TC** or as a top coat for **COROFLAKE 24 M**.

#### FEATURES

- High diffusion resistance
- Good chemical resistance to inorganic and organic acids, alkalis, organic solvents and especially to hypochlorite solutions and sodium hydroxide
- Very good adhesion to steel
- Application by airless-spraying, rolling or brushing
- Can be loaded quickly after application

#### CHEMICAL RESISTANCE

Requests for chemical resistance can be sent to [awt@tiptop-elbe.de](mailto: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
<b>COROFLAKE N PRIMER</b>	100	100
<b>HARDENER No. 1 CLEAR</b>	2	2

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#### MIXING RATIO

Coating / topcoat	Weight parts	Volume parts
COROFLAKE 24	100	100
HARDENER No. 1 CLEAR / RED	2	2.2

#### APPLICATION METHOD | CONSUMPTION

Always observe the current application instruction before using the products. During coating work, direct or indirect sunlight must be avoided absolutely. If **COROFLAKE 24** is applied by rolling or brushing, at least the double number of top coats are required to achieve the specified total dry film thickness. Ground surfaces must be generally cleaned with **SOLVENT F12**.

Product	Application	Thickness	Consumption
COROFLAKE N PRIMER	Roll / brush / airless spray	covering	ca. 150 g/m <sup>2</sup>
COROFLAKE 24	Airless spray / roll / brush	500 - 700 µm	ca. 900 - 1100 g/m <sup>2</sup>

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 N PRIMER	60 min	40 min	20 min	8 h	14 d
COROFLAKE 24	90 min	60 min	30 min	4 h	7 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 24	0,5 kV / 100 µm DFT

#### APPROVALS AND TEST CERTIFICATES

Certificate of suitability according to the guidelines CFR 21 § 175.300 of the Food and Drug Administration (FDA).

#### DELIVERY FORM | MINIMUM SHELF LIFE

Product	Packaging	Article No.	Storage temperature	Min. shelf life
COROFLAKE 24	5 kg	590 0538	≤ +10°C   ≤ +20°C	9 Mon   6 Mon
COROFLAKE 24	20 kg	590 0064	≤ +10°C   ≤ +20°C	9 Mon   6 Mon
COROFLAKE N PRIMER	5 kg	590 0480	≤ +10°C   ≤ +20°C	9 Mon   6 Mon
COROFLAKE N PRIMER	20 kg	590 0040	≤ +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
HARDENER No. 1 RED	0.1 kg	590 0356	5 - 20°C	12 Mon

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#### DELIVERY FORM | MINIMUM SHELF LIFE

Product	Packaging	Article No.	Storage temperature	Min. shelf life
HARDENER No. 1 RED	0.4 kg	590 0112	5 - 20°C	12 Mon
SOLVENT F12	4 kg	590 0095	5 - 20°C	12 Mon
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	92
Adhesive strength steel	EN ISO 4624 (ASTM D4541)	N/mm <sup>2</sup>	≥ 7
Barcol hardness	EN 59 (ASTM D2583)	Barcol	≥ 35
Density (mixture)	EN ISO 2811 (ASTM D1475)	g/cm <sup>3</sup>	1.15 ± 0.02
Linear coefficient of thermal expansion	ISO 11359-2 (ASTM C531)	K <sup>-1</sup>	27 - 30 x 10 <sup>-6</sup>
Max. Temperature dry (flue gases)	-	°C	+120
Max. Temperature for liquids	-	°C	+75
Modulus of elasticity (bending test)	EN ISO 178 (ASTM D790)	N/mm <sup>2</sup>	3000 ± 500
Polymer base	-	-	Vinyl ester
Tensile strength	EN ISO 527 (ASTM D638)	N/mm <sup>2</sup>	20
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3250 ± 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.