

PRODUCT INFORMATION

COROFLAKE 23 M

PRODUCT DESCRIPTION

COROFLAKE 23 M is a combination of a fibreglass mat reinforced laminate lining, based on a Bisphenol-A vinyl ester resin and with an inert flake filled topcoat, based on a high chemical and thermal resistant Novolac vinyl ester resin. Due to the excellent mechanical properties, **COROFLAKE 23 M** can cover cracks up to 0.2 mm according to DIBt (German Institute for Construction Technology) guidelines.

COATING LAYERS CONSUMPTION

The laminate lining consists of the two-component **COROFLAKE N PRIMER**, the three-component basecoat, the two-component reinforced layer with one 300 g/m² fibreglass mat as well as one 26 g/m² C-glass surface veil and at least one coat of the two component **COROFLAKE 23** topcoat. Depending on the present stress, multiple topcoats can be applied. The total applied DFT can be up to approx. 2.0 - 3.0 mm. If a high-voltage testing of the laminate lining on concrete is required, **COROFLAKE N PRIMER AS** must be used as primer instead.

FIELDS OF APPLICATION

Due to its good crack bridging properties, **COROFLAKE 23 M** is ideal for use of concrete structures such as absorbers, vessels, floors and pits. Due to the excellent chemical resistance **COROFLAKE 23 M** can be also used in many other areas, such as bio gas plants or concrete silos.

FEATURES

- Excellent chemical resistance to strong inorganic acids, lye and organic solvents
- Universal application
- Crack-bridging properties
- Outstanding adhesion to concrete
- Can be exposed to process conditions shortly after application

CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

SUBSTRATE

Substrates are components made of concrete, screed or plaster. Components to be coated shall be designed and manufactured in accordance with EN 14879-1. In addition, DIN 1045 must also be observed.

SURFACE PRE-TREATMENT

Appropriate action shall be taken to prepare the concrete surfaces; dry and free of dust and free of contaminants such as oil or grease. The concrete shall have minimum tensile strength of 1.5 N/mm² and minimum compressive strength of 25 N/mm². The residual moisture content must not exceed 4%.

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.

Trowel applies the basecoat onto the primed surface at approx. 1.0 - 1.5 mm. Upon placement of the basecoat, the 300 g/m² fibreglass mat is pressed onto the surface and saturated by roller with resin mixture. Afterwards a 26 g/m² C-glass surface veil is pressed onto the surface and saturated by roller with resin mixture. Finally one coat of **COROFLAKE 23** is applied in DFT of 500 - 700 µm per coat as final topcoat. The **COROFLAKE 23** topcoat is applied using an airless air spray system or by rolling or brushing.

In case **COROFLAKE 23** is applied by brushing or rolling, additional coats may be required to achieve the required total DFT. 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 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 (non-conductive)	Parts by Weight	Parts by Volume
COROFLAKE N PRIMER	100	100
HARDENER No. 1 CLEAR	2	2

Primer (conductive)	Parts by Weight	Parts by Volume
COROFLAKE N PRIMER AS	100	100
COROFLAKE ACCELERATOR No. 1	1 - 2	1.1 – 2.1
HARDENER No. 1 CLEAR	2	2

Basecoat	Parts by Weight	Parts by Volume
COROFLAKE N PRIMER	100	100
HARDENER No. 1 CLEAR	2	2
FILLER F1	200	189

Laminate Layer	Parts by Weight	Parts by Volume
COROFLAKE N PRIMER	100	100
HARDENER No. 1 CLEAR	2	2

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

CONSUMPTION

Layer	Product	Coverage [g/m ²]
Primer	COROFLAKE N PRIMER	ca. 300
Basecoat	COROFLAKE N PRIMER	ca. 1000
	FILLER F1	ca. 2000
Laminate Layer	COROFLAKE N PRIMER	ca. 660
	1 x Fibreglass mat 300 g/m ²	ca. 330
	1 x C-glass surface veil 26 g/m ²	ca. 30
Topcoat	COROFLAKE 23	ca. 900 - 1100*

* Per layer

POT LIFE / WORKING TIME [min]

Product	15°C	20°C	30°C
COROFLAKE N PRIMER	ca. 60	ca. 40	ca. 20
COROFLAKE N PRIMER AS	ca. 60	ca. 35	ca. 10
COROFLAKE 23	ca. 90	ca. 60	ca. 30

RECOAT TIME (20°C)

Product	Min. [h]	Max. [Days]
COROFLAKE N PRIMER	ca. 8	ca. 14
COROFLAKE N PRIMER AS	ca. 4	ca. 14
COROFLAKE 23	ca. 4	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 ACCELERATOR No. 1	0.4 kg	590 2985
COROFLAKE N PRIMER	5 kg	590 0480
COROFLAKE N PRIMER	20 kg	590 0040
COROFLAKE N PRIMER AS	5 kg	590 2983
COROFLAKE N PRIMER AS	20 kg	590 2990
COROFLAKE 23	5 kg	590 0514
COROFLAKE 23	20 kg	590 0057
C-glass surface veil - 26 g/m ²	250 m ²	590 9800
E-Glass mat - 300 g/m ²	20 m ²	590 0222

Product	Size	Article No.
E-Glass mat - 300 g/m ²	20 m ²	590 0239
E-Glass mat - 300 g/m ²	50 m ²	590 0246
FILLER F1	25 kg	591 0140
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	≤ 10°C	9 Months
	≤ 20°C	6 Months
COROFLAKE ACCELERATOR No. 1	5 – 20°C	6 Monate
COROFLAKE N PRIMER	≤ 10°C	9 Months
	≤ 20°C	6 Months
COROFLAKE N PRIMER AS	5 – 20°C	6 Monate
FILLER F1	-	24 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.



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COROFLAKE 23 M

Technical Data	Standard	Unit	Value
Abrasion	ASTM D4060	mg	90
Modulus of Elasticity (Bend Test)	EN ISO 178 (ASTM D790)	N/mm ²	3650 ± 150
Hardness Barcol	EN 59 (ASTM D2583)	-	≥ 35
Min. Adhesion Strength Concrete	EN ISO 4624 (ASTM D7234)	N/mm ²	1.5*
Test Voltage (earliest after 24 hours)	EN 14879-3	kV / 100µm DFT	0.5
Viscosity	EN ISO 2555 (ASTM D2196)	mPa·s	3000 ± 250
Linear Coefficient of Thermal Expansion	ISO 11359-2 (ASTM C531)	1/K	25-30 x 10 ⁻⁶
Max. Operating Temperature Liquids	-	°C	+75

* Depending on the concrete strength

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.

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