

# TECHNICAL BULLETIN

## COROFLAKE 18

- Product Description:** *COROFLAKE 18* is a two component, C-glass flake filled Novolac vinyl ester lining system. This lining system consists of one primer @ 50 µm nominal, one body coat and one topcoat @ 800 –1,000 µm DFT per coat to produce a total DFT of 2,000 µm nominal. The vinyl ester resin provides excellent chemical resistance and firmly bonds the multiple layers of overlapping micron-thick C-glass flakes to achieve an extremely low permeation rate, which greatly reduces water vapour passage through the lining.
- Recommended Uses:** *COROFLAKE 18* provides the longest lasting, most effective lining system for corrosion prevention in the Chemical Process Industries. It can be used to protect internal surfaces of absorbers in Flue Gas Desulphurisation Systems.
- Temperature Resistance:** + 90 °C wet + 160 °C dry
- Generic Type:** Novolac Vinyl Ester
- Filler:** C-Glass Flakes
- Solvent:** Styrene (reactive)
- Design:** The steel construction to be coated must be fabricated according to the DIN EN 14879-1:2005. Further information can be taken from our steel specification documents.
- Preparation:** Steel substrates, which have been previously been used in service, require a chemical check for the presence of invisible traces of iron sulphate and or iron chloride. If the check is positive, the total surface area needs to be washed down thoroughly with de-ionised water. In each case, steel substrate shall be prepared by abrasive blasting to obtain a Sa 2½ surface, as defined in DIN EN ISO 12 944 Part 4 and a minimum surface profile @ 60 µm "Medium (G)" as defined in DIN EN ISO 8503-2.
- Build-up of the system:**
- |                             | Layer Thickness    | Coverage                   |
|-----------------------------|--------------------|----------------------------|
| COROFLAKE S PRIMER          | 1 x 40 - 60 µm     | 150 g/m <sup>2</sup>       |
| <b>COROFLAKE 18</b> Coating | 2 x 800 – 1,000 µm | 2 x 1.700 g/m <sup>2</sup> |
- Mixing Ratio:** 100:2 COROFLAKE S PRIMER or resin to HARDENER No.1 by weight. Stir hardener always into resin-based component, using a low speed mechanical agitator.
- Pot Life:** 1 ½ hrs. (+ 10 °C) 1 hr. (+ 20 °C) ½ hrs. (+ 30 °C)
- Application Equipment:** Trowel and Roller.

<b>Application:</b>	Primer is normally applied by brush or roller. During application observe pot life limitations. The substrate temperature shall be at + 8 °C to + 36 °C. The air temperature shall be at + 10 °C to + 36 °C (3 K above dew point). The following topcoats should be applied no longer than seven days later. Refer to the application instruction for further details.	
	Note: During application the coated surface must be shaded from direct or indirect sunlight. Intercoat disbondment may otherwise occur.	
<b>Cleaning:</b>	Solvent T-100	
<b>Shelf Life:</b>	The shelf life is 3 months when stored @ + 20 °C. <b>COROFLAKE 18</b> Resin, Primer and HARDENER No. 1 should be stored at a cool and dry place.	
<b>Density:</b>	1.2 kg/l (mixed)	
<b>Viscosity:</b>	semi thixotropic	
<b>Flash Point:</b>	<b>COROFLAKE 18</b>	+ 32 °C and
	HARDENER No. 1	+ 70 °C
<b>Modulus of Elasticity:</b>	5,000 – 8,000 MPa (DIN EN ISO 178) flexural	
<b>Tensile Strength:</b>	30 Mpa (DIN EN ISO 527)	
<b>Coefficient of Expansion:</b>	25 - 30 x 10 <sup>-6</sup> 1/°C (ASTM D 696-90) linear	
<b>Abrasion:</b>	68 mg (ASTM – D 4060)	
<b>Permeation:</b>	0.00001 perm-inch (ASTM – E 96 - 90 Procedure E)	
<b>Adhesion:</b>	4 N/mm <sup>2</sup> (EN ISO 4624) to grit blasted C-Steel	
<b>Hardness:</b>	35 Barcol (DIN EN 59)	

This Technical Bulletin is for informational purposes only. All data provided herein is based on in-depth research and testing, however no liability whatsoever can be assumed. Since we are constantly endeavouring to up-date and improve our products, we recommend noting the index and issue date indicated on this data sheet and to inquire as to whether any properties have changed in the interim. This Product Information Sheet replaces all prior issues. Please contact our Technical Consultant for detailed information in case of ambiguities.

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