

TECHNICAL BULLETIN

COROFLAKE 14

Product Description:	COROFLAKE 14 is a two component, C-glass flake filled Bisphenol-A 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 1,800 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 14 provides the longest lasting, most effective lining system for corrosion prevention in the Chemical Process Industry. It can be used to protect internal surfaces of absorbers in FGD (Flue Gas Desulphurisation) systems and steel tanks in the paper industry.		
Temperature Resistance:	+ 90 °C wet		+ 120 °C dry
Generic Type:	Bisphenol–A 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 N PRIMER	1 x 40 - 60 µm	150 g/m ²
	COROFLAKE 14 Resin	2 x 800 – 1,000 µm	2 x 1.700 g/m ²
Mixing Ratio:	100:2 COROFLAKE N PRIMER or COROFLAKE 14 Resin to HARDENER No. 1 by weight. Mix hardener into resin-based component, using a low speed mechanical agitator.		
Pot Life:	1 ½ hrs. (+ 10 °C)	1 hrs. (+ 20 °C)	½ hrs. (+ 30 °C)
Application Equipment:	Trowel and Roller.		

Application:	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.	
	<i>Note:</i> During application the coated surface must be shaded from direct or indirect sunlight. Intercoat disbondment may otherwise occur.	
Cleaning:	Solvent T-100	
Shelf Life:	The shelf life is 6 months when stored @ + 20 °C. COROFLAKE 14 Resin, Primer, HARDENER No. 1 should be stored at a cool and dry place.	
Density:	1.2 kg/l (mixed)	
Viscosity:	semi thixotrope	
Flash Point:	COROFLAKE 14	+ 32 °C and
	HARDENER No. 1	+ 70 °C
Modulus of Elasticity:	5,000 – 8,000 MPa (DIN EN ISO 178) flexural	
Tensile Strength:	30 MPa (DIN EN ISO 527)	
Coefficient of Expansion:	25 - 30 x 10 ⁻⁶ 1/°C (ASTM D 696-90) linear	
Abrasion:	68 mg (ASTM – D 4060)	
Permeation:	0.00001 perm-inch (ASTM – E 96 - 90 Procedure E)	
Adhesion:	4 N/mm ² (EN ISO 4624) to grit blasted C-Steel	
Hardness:	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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