

TECHNICAL BULLETIN

COROFLAKE 23

Product Description:	COROFLAKE 23 is a two component, inert flake filled, Novolac vinyl ester coating system. This coating system consists of one primer @ 50 µm nominal and three coats @ 500 µm WFT per coat to produce a total DFT of 1,500 µm nominal. The vinyl ester resin provides outstanding chemical and high temperature resistance. The multiple layers of overlapping micron-thick mineral flakes which are essential to establish needed physical properties, create an effective barrier to permeation and extend service life.		
Recommended Uses:	COROFLAKE 23 exhibits long-term protection against sulphuric acid, high temperature and condensing vapours. It is especially formulated for the demanding conditions in lignite-fired power station chimneys and ducts where Flue Gas Desulphurization Systems (FGD) has been installed.		
Temperature Resistance:	+ 70 °C wet	+ 180 °C dry	+ 220 °C (short term)
Generic Type:	Novolac Vinyl Ester		
Filler:	Inert 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 ²
	COROFLAKE 23	3 x 500 – 700 µm	3 x 1.100 g/m ²
Mixing Ratio:	100:2 COROFLAKE S Primer or Liquid to HARDENER No. 1 by weight. Mix always 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:	Conventional Air or Airless Spray, Brush and Roller.		

Application:	Primer is normally applied by brush or roller. Spray application can be used, but requires extra clean surface. COROFLAKE 23 shall be applied in three coats utilizing an airless or conventional air spray system. Small areas may be coated by brush or roller. The substrate- and air temperature shall be @ + 10 °C to + 36 °C (3 K above dew point). Primer may be recoated after initial set, which will occur normally after 4 hours, first coat must be applied within seven days. The following coats should be applied no longer then three days later. Note: During application the coated surface must be shaded from direct or indirect sunlight. Otherwise intercoat disbondment may occur.
Cleaning:	Solvent T-100
Shelf Life:	The shelf life is 6 months when stored @ + 20 °C. COROFLAKE 23 Resin, HARDENER No. 1 should be stored at a cool and dry place.
Density:	1.2 kg/l (mixed)
Viscosity:	3,000 mPas ± 250
Flash Point:	COROFLAKE 23 + 32 °C and HARDENER No. 1 + 70 °C
Modulus of Elasticity:	3,000 – 4,000 Mpa (DIN EN ISO 178) flexural
Tensile Strength:	20 Mpa (DIN EN ISO 527)
Elongation at Tear:	0.5 % (DIN EN ISO 527)
Coefficient of Expansion:	25 - 30 x 10 ⁻⁶ 1/°C (ASTM D 696-90) linear
Abrasion:	90 mg (ASTM – D 4060)
Permeation:	0.0016 perm inch (ASTM-E 96 – 90) Procedure E
Adhesion:	minimum 7.0 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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