TECHNICAL BULLETIN

COROFLAKE C

Product Description: ***COROFLAKE C*** is a two component, graphite flake filled, Novolac vinyl ester coating system. This coating system consists of one primer @ 50 µm nominal and two coats @ 500 - 700 µm WFT per coat to produce a total DFT of 1,000 µm nominal. The vinyl ester resin provides outstanding chemical and high temperature resistance. The multiple layers of micron-thick graphite flakes, which are essential to establish needed conductive properties, create also an effective barrier to permeation.

Recommended Uses: ***COROFLAKE C*** exhibits excellent resistance to both aliphatic and aromatic solvents and inorganic acids. It can be used where electrical conductivity is required. ***COROFLAKE C*** has proven performance in tanks and steel structures as topcoat for COROFLAKE 23 and COROFLAKE 28 in HF environments

Temperature Resistance: + 70 °C wet (insulated) + 180 °C dry

Generic Type: Novolac Vinyl Ester

Filler: Graphite 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 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 AS	1 x 40 - 60 µm	150 g/m²
COROFLAKE C Resin	2 x 500 – 700 µm	2,200 g/m²

Mixing Ratio: 100:2 ***COROFLAKE N Primer AS*** and ***COROFLAKE C*** Resin 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 hr. (+ 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 C*** shall be applied in two 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 more 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 below + 20 °C. ***COROFLAKE C*** Resin, ***COROFLAKE N Primer AS*** and HARDENER No. 1 should be stored at a cool and dry place.
Density:	1.2 kg/l (mixed)
Viscosity:	2,250 mPas ± 250
Flash Point:	***COROFLAKE C*** (Styrene) + 32 °C and HARDENER No. 1 + 70 °C
Modulus of Elasticity:	3,500 – 4,500 MPa (DIN EN ISO 178) flexural
Heat conducting ability:	0.30 W/m.K (DIN 52612 –1)
Leakage resistance to earth:	< 10^6 OHM (DIN EN ISO 1081)
Elongation at Tear:	0.3 % (DIN EN ISO 527)
Coefficient of Expansion:	30 x 10^{-6} 1/°C (ASTM D 696-90) linear
Abrasion:	70 mg (ASTM – D 4060)
Permeation:	0.0024 perm-inch (ASTM – E 96 - 90 Procedure E)
Adhesion:	4 N/mm² (EN ISO 4624) to grit blasted C-Steel
Hardness:	70 Shore D (DIN 53505)

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