B-TEAM
CORROSION PROTECTION
Coat for Every Industry!

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TECHNICAL BULLETIN

COROFLAKE 24

Product Description:

COROFLAKE 24 is a two component, inert flake filled, Bisphenol-A vinyl ester coating system. This coating system consists of one primer @ 50 µm nominal and two or three coats @ 500 - 700 µm WFT per coat to produce a total DFT of 1,000 µm or 1,500 µm nominal. The vinyl ester resin provides outstanding chemical resistance.

Recommended Uses:

COROFLAKE 24 is so versatile that its uses range from floor coatings to interior absorber linings to coating pipeline exteriors. Its primary use, however, has been in protecting against corrosive conditions encountered in metal processing oil production, chemical processing, and waste treatment facilities. Three coats are required for wet conditions at 70 °C.

Temperature Resistance: + 50 °C wet (2 coats) + 70 °C wet (3 coats) + 120 °C dry

Generic Type: Bisphenol A Vinyl Ester

Filler: Inert Flakes

Solvent: Styrene (reactive)

Design:

The steel and concrete construction to be coated must be fabricated according to the EN 14879-1:2005. For concrete structures also refer to DIN 1045. Further information can be taken from our steel or concrete specifications.

Preparation:

Concrete

Contaminants such as oil or grease must be removed prior to the application. The best preparation is abrasive blast to open holes covert with cement and to roughen the surface. The resulting surface should be at least as rough as 40 grit sand paper. Concrete should be thoroughly cured for at least 28 days. Use plastic sheet method (ASTM 4263) to ensure the moisture content is less as 4%. The cured concrete should have a minimum compressive strength of 25 N/mm¸ and a minimum surface strength of 1.5 N/mm¸.

Steel

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 2˝ 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 for steel	1 x 40 – 60 µm	150 g/m¸
COROFLAKE N PRIMER for concrete	1 x 80 – 120 µm	300 g/m¸
COROFLAKE 24	2 x 500 – 700 µm	2,200 g/m¸

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Mixing Ratio:	100:2 ***COROFLAKE N*** PRIMER or ***COROFLAKE 24*** resin to HARDENER No. 1 by weight. Mix always hardener into resin-based component, using a low speed mechanical agitator.
Pot Life:	1 ˝ hrs. (+ 10 °C) 1 hrs. (+ 20 °C) ˝ hrs. (+ 30 °C)
Application Equipment:	Conventional Air or Airless Spray, Brush and Roller.
Application:	***COROFLAKE N*** PRIMER is normally applied by brush or roller. Spray application for steel substrate can be used, but requires extra clean surface. ***COROFLAKE 24*** shall be applied in two or three coats utilising 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 8 hours, first coat must be applied within seven days. The following topcoats should be applied no longer then seven days later. The given values are applicable at 20 °C. During application the lined 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 24*** Resin, Primer and HARDENER No. 1 should be stored at a cool and dry place.
Density:	1.2 kg/l (mixed)
Viscosity:	2,750 mPas ± 250
Flash Point:	***COROFLAKE 24*** + 32 °C and HARDENER No. 1 + 70 °C
Modulus of Elasticity:	2,500 – 3,500 MPa (DIN EN ISO 178) flexural
Thermal Conductivity:	0.30 W/m.K (DIN 52612 T1)
Coefficient of Expansion:	27 - 30 x 10^{-6} 1/°C (ASTM D 696-90) linear
Abrasion:	92 mg (ASTM – D 4060)
Permeation:	0.0014 perm inch (ASTM-E 96 – 90) Procedure E
Adhesion:	7.0 N/mm¸ (EN ISO 4624) to grit blasted C-Steel, 1.5 N/mm¸ (EN ISO 4624) to concrete
Hardness:	35 Barcol (DIN EN 59)