TECHNICAL BULLETIN

COROFLAKE 200

Product Description: ***COROFLAKE 200*** is a two component, flake filled Novolac Epoxy coating system. This system consists of one coat with ***COROFLAKE 68*** PRIMER and two coats ***COROFLAKE 200*** @ 500 µm WTF per coat to produce a total DFT of 0.8 - 1.2 mm nominal.

Recommended Uses: ***COROFLAKE 200*** developed for protection of steel and concrete surfaces that are subjected to immersion of alkalis and diluted acids. The ability to tolerate surface moisture in concrete and to cure at temperatures of + 3°C making this system ideal for applications in the open air. This high performance coating system provides excellent resistance to 98 % sulphuric acid spillages in secondary containment areas, along with good corrosion resistance to caustics.

Temperature Resistance: + 60 °C wet + 95 °C dry

Generic Type: Epoxy Resin

Filler: Glass-Flakes

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 covered with cement and to roughen the surface. 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 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:

	Thickness Layer	Coverage
COROFLAKE 68 PRIMER Steel	1 x 40 – 60 µm	150 g/m¸
COROFLAKE 68 PRIMER Concrete	1 x 80 – 120 µm	300 g/m¸
COROFLAKE 200 Topcoat	2 x 400 – 600 µm	2 x 800 g/m¸

Pot Life: 32 hrs. (+ 2 °C) 16 hrs. (+ 10 °C) 6 hrs. (+ 20 °C) 4 hrs. (+ 30 °C)

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Mixing Ratio:	For primer 12:3.6 resin to hardener by weight. Mix hardener into resin using a low speed mechanical agitator. For body coat and topcoat each component should be premixed because of settling that may occur during shipping and storage. Pour Component "B" into Component "A" while mixing slowly with a mechanical jiffy type of mixer.
Pot Life:	3 hrs. (+ 10 °C) l' hr. (+ 20 °C) L' hr. (+ 30 °C)
Application Equipment:	Conventional- or Airless Spray.
Application:	During application observe pot life limitations. The minimum substrate temperature shall be at + 3 °C up to + 40 °C, the minimum air temperature shall be + 5 °C up to + 40 °C (3 K above dew point). Primer is normally applied by brush or roller. ***COROFLAKE 200*** topcoats shall be applied utilizing an airless or conventional air spray system. The ***COROFLAKE 200*** coats should be recoated within 48 hours to assure proper adhesion. Longer recoat times may result in intercoat disbondment. Notes: A thermal curing must be done if concentrated sulphuric acid will be stored. Further details can be taken from the Application Instruction. In atmospheric exposure ***COROFLAKE 200*** has a tendency to chalking with time.
Caution:	Amine blush is possible. Precautions should be taken. Make sure there is no amine blush present before application of second coat. If present wash with water and allow to dry.
Cleaning:	Solvent T-100
Shelf Life:	The shelf life is 12 months when stored @ + 20 °C. Primer, hardener, body coat and top coat components should be stored in cool and dry places.
Density:	1.4 kg/l (mixed)
Viscosity:	9,000 – 11,000 mPas
Solid Content:	100 %
Flash Point:	***COROFLAKE 200***, Comp. A + 98 °C and ***COROFLAKE 200***, Comp. B + 97 °C
Modulus of Elasticity:	8,000 – 12,000 MPa (DIN EN ISO 178) flexural
Coefficient of Expansion:	27 - 30 x 10^{-6} 1/°C (ASTM D 696-90) linear
Tensile Strength:	23 Mpa (DIN EN ISO 527)
Compressive Strength:	62 Mpa (DIN EN ISO 604)
Adhesion:	7.0 N/mm¸ (EN ISO 4624) to C-Steel; 1.5 N/mm¸ (BS 1881) to concrete