TECHNICAL BULLETIN

COROFLAKE 60

Product Description:

COROFLAKE 60 is a two component, inert-flake filled, adduct hardening coating system based on epoxy. This coating system consists of one primer @ 50 µm nominal and two coats@ 200 - 300 µm WFT per coat to produce a total DFT of 400 µm nominal. The epoxy resin provides extraordinary longevity in a wide variety of corrosive exposure. The multiple layers of overlapping micron-thick mineral flakes, which are essential to establish needed physical properties, create an effective barrier to permeation. The adduct hardening system allow cure temperatures down to + 3°C and a high residual moisture tolerance.

Recommended Uses:

COROFLAKE 60 is a protective coating for metal and concrete in those environments where moderate to severe corrosive conditions exist. It is used as a light duty lining in alkalies, water or mild chemical solutions at ambient temperatures. May also be used for corrosion protection in chemical fumes, spillage or marine atmospheres.

Temperature Resistance:

+ 50 °C wet + 110 °C dry

Generic Type:

Polyamide Epoxy Resin

Filler:

Mineral 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 covert with cement and to roughen the surface. The cured concrete should have a minimum compressive strength of 25 N/mm² and a minimum surface strength of 1.5 N/mm².

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 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 68 PRIMER Steel	1 x 40 - 60 µm	150 g/m²
COROFLAKE 68 PRIMER Concrete	1 x 80 – 120 µm	300 g/m²
COROFLAKE 60 Coating	2 x 200 µm	2 x 300 g/m²

Mixing Ratio:	Mix 12.0 kg ***COROFLAKE 60*** Comp. “A“ with 9.0 kg Comp. “B“ using a low speed mechanical agitator.		
Pot Life:	2 hrs. (+ 10 °C)	1 hrs. (+ 20 °C)	½ hrs. (+ 30 °C)
Drying Time:	28 hrs. (+ 10 °C)	14 hrs. (+ 20 °C)	8 hrs. (+ 30 °C)
Recoating Time:	36 hrs. (+ 10 °C)	18 hrs. (+ 20 °C)	10 hrs. (+ 30 °C)

Application Equipment: Conventional or Airless-Spray equipment, Brush and Roller.

Application: Primer is normally applied by brush or roller. Spray application can be used, but requires an extra clean surface. ***COROFLAKE 60*** shall be applied in two coats utilizing an airless or conventional air spray system. Small areas may be coated by brush or roller. The air temperature shall be @ + 5 °C to + 40 °C and the substrate temperature shall be @ + 3 °C (3 K above dew point). Primer may be recoated after initial set, which will occur normally after 14 hours, first coat must be applied within seven days. The following topcoat should be applied no longer then seven days later. The given values are applicable at + 20 °C.

Notes: During application the coated surface must be shaded from direct or indirect sunlight. Otherwise intercoat disbondment may occur. In atmospheric exposure ***COROFLAKE 60*** has a tendency to chalking with the time.

Cleaning: Solvent T-100

Shelf Life: The shelf life is 12 months when stored @ + 20 °C. ***COROFLAKE 60*** Resin, Primer and HARDENER No. 4 should be stored at a cool and dry place.

Density: 1.25 kg/l (mixed)

Viscosity: 700 – 1,100 mPas (mixed)

Solid Content: 85 % +/- 2 (mixed)

Flash Point:

COROFLAKE 60 Comp. A	+ 2 °C
COROFLAKE 60 Comp. B	+ 99 °C and
HARDENER No. 4	+ 109 °C

Modulus of Elasticity: 3,000 – 3,500 MPa (DIN EN ISO 178) flexural

Tensile Strength: 30 MPa (DIN EN ISO 527)

Coefficient of Expansion: 30×10^{-6} 1/°C (ASTM D 696-90) linear

Abrasion: 100 mg (ASTM – D 4060)

Permeation: 0.07 perm-inch (ASTM – E 96 - 90 Procedure E)

Adhesion: 7 N/mm² (EN ISO 24624) to grit blasted C-Steel, 1.5 N/mm² to concrete

Hardness: 35 Barcol (DIN EN 59)

TIP TOP Oberflächenschutz Elbe GmbH, Heuweg 4, D-06886 Wittenberg
Telefon: (0 34 91) 6 35 – 50, Telefax: (0 34 91) 6 35 – 5 52