TECHNICAL BULLETIN

COROFLAKE 650 FDA

Product Description:

COROFLAKE 650 FDA is a two component coating system based on epoxy resin. This coating system consists of at least two coats @ 150 - 200 µm WFT per coat to produce a total DFT of 300 µm nominal. The epoxy resin provides a good chemical resistance against the most commonly chemicals used in the food and beverage industry.

Recommended Uses:

COROFLAKE 650 FDA 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. Due to the formulation according to the FDA guideline CFR 177.2420 and the German KTW Regulations ***COROFLAKE 650 FDA*** is a versatile coating for use in the food, drug and beverage industry.

Temperature Resistance:

+ 50 °C wet + 110 °C dry

Generic Type:

Epoxy Resin

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. 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 were under service conditions already, require a chemical check for the presence of invisible traces of iron sulphate and or iron chloride. In each case, steel substrate shall be prepared by abrasive blasting to obtain a Sa 2½ surface, as defined in DIN EN ISO 12 944-4 and a minimum surface profile @ 60 µm “Coarse (G)” as defined in DIN EN ISO 8503-2.

Build-up of the system:

	Thickness	Coverage
COROFLAKE 650 FDA	2 x 150 µm	2 x 400 g/m²

Mixing Ratio:

Mix 18.0 kg ***COROFLAKE 650 FDA*** Comp. “A” with 3.0 kg ***COROFLAKE 650 FDA*** Comp. “B” using a low speed mechanical agitator.

Pot Life:	24 hrs. (+ 10 °C)	10 hrs. (+ 20 °C)	6 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:	The air temperature shall be minimum + 13 °C to + 40 °C and the substrate temperature shall be minimum + 10 °C (3 K above dew point). The topcoat should be applied no longer not later then two weeks later. The given values are applicable for + 20 °C. Refer to the application instruction for further details. Notes: With atmospheric exposure ***COROFLAKE 650 FDA*** has a tendency to chalking with the time.
Cleaning:	Solvent T-100
Shelf Life:	The shelf life is 12 months when stored @ + 20 °C. The materials should be stored at a cool and dry place.
Density:	1.25 kg/l (mixed)
Viscosity:	1000 mPas (mixed)
Flash Point:	18 °C (mixed)
Modulus of Elasticity:	3,000 – 3,500 MPa (DIN EN ISO 178) flexural
Coefficient of Expansion:	30 x 10^{-6} 1/°C (ASTM D 696-90) linear
Abrasion:	210 mg (ASTM – D 4060)
Permeation:	0.07 perm-inch (ASTM – E 96 - 90 Procedure E)
Adhesion:	7 N/mm² (EN ISO 4624) to grit blasted C-Steel, 1.5 N/mm² to concrete
Hardness:	> 70 Shore D (DIN 53 505)

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