TECHNICAL BULLETIN

TIP TOP LINING 68 FOR CONCRETE

Product Description:

TIP TOP LINING 68 is a three component, powder filled lining system. This system consists of one moisture tolerant primer, one trowel applied body coat, a 300 g/m² fiberglass mat as reinforcement and a spray applied mica flake filled topcoat to produce a total DFT of 2.5 – 3.5 mm nominal. This system is capable of bridging cracks in concrete structures.

Recommended Uses:

This high performance lining system provides excellent crack bridging capabilities along with good general corrosion resistance. It is particularly well suited for clarifiers, thickeners and for most conditions in secondary applications, including containment of chemicals, oils and waste effluents. ***TIP TOP LINING 68*** is highly suitable for application as a crack bridging lining and can cover cracks bigger than 0.2 mm in accordance with DIBt Specifications.

Temperature Resistance:

+ 80 °C saturated water vapour

Generic Type:

Epoxy Resin

Filler of Body Coat:

F 1 Silica Powder and Inert Flakes for the topcoat

Design:

The concrete construction to be lined must be fabricated according to the EN 14879-1:2005. Cracks should be smaller than 0.2 mm. Further information can be taken from our 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/mm² and a minimum surface strength of 1.5 N/mm².

Build-up of the system:

		Coverage
TIP TOP LINING 68 Primer	***COROFLAKE 68 PRIMER***	
	+ HARDENER No. 4	300 g/m²
TIP TOP LINING 68	***COROFLAKE 68*** Resin	
Base Coat	+ HARDENER No. 4	1,000 g/m²
	F-1 Filler	2,400 g/m²
TIP TOP LINING 68	***COROFLAKE 68*** Resin	
Reinforcement	+ HARDENER No. 4	660 g/m²
	Glass Mat 300 g/m²	330 g/m²
COROFLAKE 60 Topcoat	Comp. “A” + Comp. “B”	300 g/m²

Mixing Ratio:	***COROFLAKE 68*** Resin for primer, body coat and resin 12:3.6 resin to hardener by weight. Mix hardener into resin using a low speed mechanical agitator. For body coat, stir 2,400 g of the F-1 filler slowly into the 1,000 g of the mixed resin until it's a well-dispersed semithixotropic mortar. For the topcoat mix 12:9 Component "A" to Component "B" by weight.
Pot Life:	32 hrs. (+ 2 °C) 16 hrs. (+ 10 °C) 6 hrs. (+ 20 °C) 4 hrs. (+ 30 °C)
Application Method:	By Trowel, Roller and Conventional- or Airless Spray.
Application:	During application observe pot life limitations. Note: The minimum substrate and air temperature shall be at + 2 °C, the maximum temperature at + 40 °C (3 K above dew point). All relevant surfaces should be primed. Trowel body coat with the mixed mortar as evenly as possible to achieve a uniform thickness at 1.0 mm. Press the glass mat into the body coat, then saturate and roll with the mixed resin until the mat has lost white colour. Allow to cure. Apply topcoat by spray or roller. Refer to the application instruction for further details. Note: In atmospheric exposure epoxy linings have a tendency to chalking with time.
Cleaning:	Solvent T-100
Shelf Life:	The shelf life is 12 months when stored @ + 20 °C. Primer, resin, topcoat components and hardener should be stored in cool and dry places.
Flash Point:	***COROFLAKE 68*** Resin + 95 °C, ***COROFLAKE 60*** Comp. A + 2 °C ***COROFLAKE 60*** Comp. B + 99 °C and HARDENER No. 4 + 109 °C
Modulus of Elasticity:	4,000 – 6,000 MPa (DIN EN ISO 178) flexural
Tensile Strength:	65 MPa (DIN EN ISO 527) Reinforcement Layer only
Compressive Strength:	65 MPA (DIN EN ISO 604)
Coefficient of Expansion:	27 - 30 x 10^{-6} 1/°C (ASTM D 696-90)
Adhesion:	1.5 N/mm² (EN ISO 4624) Concrete failure
Hardness:	20 – 30 Barcol (DIN EN 59)

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