

TECHNICAL BULLETIN

TIP TOP LINING 65 FOR CONCRETE

Product Description: *TIP TOP LINING 65* is a three component, powder filled, mat reinforced vinyl ester lining system. This system consists of one trowel applied body coat, two 450 g/m² fiberglass mats as reinforcement, one surface veil and two resin rich topcoats to produce a total DFT of 3.0 mm to 4.0 mm.

Recommended Uses: This lining system provides excellent crack bridging capabilities along with good general corrosion resistance for most conditions in chemical processes, like organic acids, bleaching lyes, sodium hydroxide and sodium hypochlorite. Through its unique properties, the lining is designed for both steel and concrete applications. *TIP TOP LINING 65* is highly suitable for application as a crack bridging lining and can cover cracks bigger than 0.2 mm according to the DIBt Specifications.

Temperature Resistance: + 75 °C Immersion, Constant Flow

Generic Type: Bisphenol-A Vinyl Ester

Filler: Silica

Solvent: Styrene (reactive)

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
COROFLAKE N PRIMER for concrete	Liquid + HARDENER No. 1	300 g/m ²
TIP TOP LINING 65 Body coat	Liquid + HARDENER No. 1 F1 Filler	1,000 g/m ² 2,500 g/m ²
TIP TOP LINING 65 Reinforcement	Liquid + HARDENER No. 1 2 Glass Mats 450 g/m ² 1 C-glass veil 30 g/m ²	2,000 g/m ² 1000 g/m ² 33g m ²
TIP TOP LINING 65 Topcoat	Liquid + HARDENER No. 1 Thin film curing agent	300 g/m ² 10 g/m ²



Mixing Ratio:	100:2, resin to hardener by weight. Mix hardener into liquid using a low speed mechanical agitator. For body coat, stir 2,500 g of the silica filler slowly into the 1000 g of the mixed resin until its a well-dispersed semi-thixotropic mortar.		
Pot Life:	1 ½ hrs. (+ 10 °C)	1 hrs. (+ 20 °C)	½ hrs. (+ 30 °C)
Application method:	By Trowel and Roller		
Application:	During application observe pot life limitations. The substrate and air temperature shall be at + 8 °C to + 32 °C (3 K above dew point). All relevant surfaces should be primed. Allow to cure. Trowel on an even coat of the mixed mortar to achieve a uniform thickness at 1.5 mm. Press the first glass mat into the body coat, then saturate and roll with the mixed resin until the mat has lost white colour. Repeat this step for the second glass mat and for the surface veil. Allow to cure. Roll first mixed topcoat, and after curing final topcoat.		
Cleaning:	Solvent T-100		
Shelf Life:	The shelf life is 6 months when stored @ + 20 °C. The lining liquid, primer and hardener should be stored in cool and dry places.		
Density:	1.1 kg/l (mixed)		
Viscosity:	450 mPas ± 50		
Flash Point:	TIP TOP LINING 65 resin	+ 32 °C and	
	HARDENER No. 1	+ 70 °C	
Modulus of Elasticity:	6,000 – 8,000 MPa (DIN EN ISO 178) flexural		
Coefficient of Expansion:	27 - 30 x 10 ⁻⁶ 1/°C (ASTM D 696-90)		
Tensile Strength:	50 MPA (DIN EN ISO 527)		
Crack Bridging:	0.2 mm (DIBt – Richtlinie)		
Compressive Strength:	65 MPA (DIN EN ISO 604)		
Adhesion:	1.5 N/m ² (EN ISO 4624) Concrete failure		
Hardness:	35 Barcol (DIN EN 59)		

This Technical Bulletin is for informational purposes only. All data provided herein is based on in-depth research and testing, however no liability whatsoever can be assumed. Since we are constantly endeavouring to up-date and improve our products, we recommend noting the index and issue date indicated on this data sheet and to inquire as to whether any properties have changed in the interim. This Product Information Sheet replaces all prior issues. Please contact our Technical Consultant for detailed information in case of ambiguities.

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