

TECHNICAL BULLETIN

TIP TOP LINING 25

Product Description:	<i>TIP TOP LINING 25</i> is a three component, powder filled, mat reinforced polyester lining system. This system consists of one trowel applied body coat, two 450 g/m ² fibreglass mats as reinforcement, a surface veil and two resin rich topcoats to produce a total DFT of 3.0 mm to 4.0 mm.		
Recommended Uses:	This high performance lining system possesses outstanding resistance to a wide range of aggressive environments such as dilute inorganic acids, alkalise, salt solutions and many organic chemicals.		
Temperature Resistance:	+ 70 °C Immersion, Constant Flow		
Generic Type:	Bisphenol -A Fumeric Acid Polyester		
Filler:	Silica		
Solvent:	Styrene (reactive)		
Design:	The steel construction to be coated must be fabricated according to the DIN EN 14879-1:2005. Further information can be taken from our steel specification documents.		
Preparation:	<p>Steel</p> <p>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. 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 12 944-4 and a minimum surface profile @ 60 µm "Coarse (G)" as defined in DIN EN ISO 8503-2.</p>		
Build-up of the system:			Coverage
	COROFLAKE N PRIMER	Liquid + HARDENER No. 1	150 g/m ²
	TIP TOP LINING 25	Liquid + HARDENER No. 2	1,000 g/m ²
	Body coat	F1 Filler	2,500 g/m ²
	TIP TOP LINING 25	Liquid + HARDENER No. 2	2,000 g/m ²
	Reinforcement	2 Glass Mats 450 g/m ²	1,000 g/m ²
		1 C-glass veil 30 g/m ²	25g m ²
	TIP TOP LINING 25	Liquid + HARDENER No. 1	300 g/m ²
	Topcoat	Thin film curing agent	10 g/m ²
	Cleaning	Solvent T-100	150 g/m ²



Mixing Ratio:	100 : 2 primer to hardener and 100 : 1.5 resin to hardener by weight. Mix hardener into the liquid using a low speed mechanical agitator. For body coat, stir 2,500 g of the silica filler slowly into the 1,000 g of the mixed resin until its a well-dispersed semi-thixotropic mortar. For the second topcoat, use curing aid for optimum curing.		
Pot Life:	1 ½ hrs. (+ 10 °C)	1 hrs. (+ 20 °C)	½ hrs. (+ 30 °C)
Application method:	By Trowel and Roller		
Application:	Note: During application the lined surface must be shaded from direct or indirect sunlight. Intercoat disbondment may otherwise occur. The minimum substrate and air temperature shall be at +8°C to + 32°C (3 K above dew point). All relevant surfaces should be troweled with the mixed mortar as evenly as possible 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 surface veil. Allow to cure. Roll first mixed topcoat without and the final topcoat with curing aid		
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:	Primer 1.01 kg/l (mixed)	Resin 1,85 (Mixed with Filler)	
Viscosity:	200 – 250 mPas	semithixotrop	
Flash Point:	Primer and resin (styrene) HARDENER No. 1 HARDENER No. 2	+ 32 °C and + 70 °C + 99 °C	
Modulus of Elasticity:	7000 – 10.000 Mpa (DIN EN ISO 178) flexural		
Coefficient of Expansion:	25 - 30 x 10 ⁻⁶ /°C (ASTM D – 696)		
Tensile Strength:	50 Mpa (DIN EN ISO 527)		
Abrasion:	90 mg (ASTM D – 4060)		
Compressive Strength:	65 Mpa (DIN EN ISO 604)		
Adhesion:	7 N/mm ² (EN ISO 4624) to grit blasted C-Steel		
Hardness:	20 - 40 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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