

# TECHNICAL BULLETIN

## TOPLINE 665 FOR CONCRETE

**Product Description:** *TOPLINE 665* is a three component, powder filled Novolac-vinyl ester lining system. This system consists of one trowel applied body coat, a 300 g/m<sup>2</sup> fibreglass mat as reinforcement and a trowel applied special filled resin topcoat to produce a total DFT of 3.0 – 4.0 mm nominal.

**Recommended Uses:** This high performance lining system possesses outstanding resistance to a wide range of aggressive environments such as strong acids, for many solvents, chlorinated aromatics and aliphatics. *TOPLINE 665* also has good chemical resistance to alkalis.

**Temperature Resistance:** + 75 °C wet

**Generic Type:** Novolac Vinyl Ester

**Filler:** Silica

**Solvent:** Styrene

**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/mm<sup>2</sup> and a minimum surface strength of 1.5 N/mm<sup>2</sup>.

Build-up of the system:		Coverage
COROFLAKE N PRIMER	Liquid + HARDENER No. 1	300 g/m <sup>2</sup>
<i>TOPLINE 665</i> Body Coat	Liquid + HARDENER No. 1 F-1 Filler	1,000 g/m <sup>2</sup> 2,500 g/m <sup>2</sup>
<i>TOPLINE 665</i> Reinforcement	Liquid + HARDENER No. 1 E- Glass mat 300 g/m <sup>2</sup>	660 g/m <sup>2</sup> 330 g/m <sup>2</sup>
<i>TOPLINE 665</i> Topcoat	Liquid + HARDENER No. 1 F-1 Filler Smoothing Liquid F-12	1,000 g/m <sup>2</sup> 2,500 g/m <sup>2</sup> 150 g/m <sup>2</sup>

**Mixing Ratio:** 100:2 resin to hardener by weight. Mix hardener into liquid using a low speed mechanical agitator. For body coat and top coat stir 2,500 g of the F-1 filler slowly into the 1,000 g of the mixed resin until it becomes a well-dispersed semi-thixotropic mortar.



<b>Pot Life:</b>	1 ½ hrs. (+ 10 °C)	1 hr. (+ 20 °C)	½ hr. (+ 30 °C)
<b>Application Equipment:</b>	By Trowel and Roller.		
<b>Application:</b>	During application observe pot life limitations.  Note: During application the lined surface must be shaded from direct or indirect sunlight. Otherwise intercoat disbondment may occur. Refer to the application instruction for further hints.		
<b>Cleaning:</b>	Solvent T-100		
<b>Shelf Life:</b>	The shelf life is 3 months when stored @ + 20 °C. The lining liquid, primer and hardener should be stored in cool and dry places.		
<b>Density:</b>	1.85 kg/l (mixed with filler)		
<b>Viscosity:</b>	semi thixotropic		
<b>Flash Point:</b>	<b>TOPLINE 665</b>	+ 32 °C and	
	HARDENER No. 1	+ 70 °C	
<b>Modulus of Elasticity:</b>	7,000 – 10,000 MPa (DIN EN ISO 178) flexural		
<b>Tensile Strength:</b>	20 MPa (DIN EN ISO 527)		
<b>Compressive Strength:</b>	85 MPa (DIN EN ISO 604)		
<b>Coefficient of Expansion:</b>	27 - 30 x 10 <sup>-6</sup> 1/°C (ASTM D 696-90) linear		
<b>Abrasion:</b>	70 mg (ASTM – D 4060)		
<b>Permeation:</b>	0.0031 perm-inch (ASTM – E 96 - 90 Procedure E)		
<b>Adhesion:</b>	1.5 N/m <sup>2</sup> (EN ISO 4624) concrete failure		
<b>Hardness:</b>	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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