

# TECHNICAL BULLETIN

## COROFLAKE 63

### Self-priming Epoxy Phenolic Coating

**Product Description:** **COROFLAKE 63** is a two component, flake reinforced epoxy phenolic coating system. The epoxy phenolic resin provides excellent chemical resistance and the flakes provide an effective barrier against permeation and extend the service life. This coating system consists of one base coat and one top coat to produce a total DFT of 300 to 400 µm.

**Recommended Uses:** **COROFLAKE 63** is a protective coating system for steel and concrete in those environments where severe corrosive conditions exist. It is suitable for petroleum products such as unleaded gasoline, jet fuel, aviation gasoline and solvents. It is also resistant against Skydrol.

**Temperature Resistance:** +55 °C wet      +155°C non-condensing fumes

**Generic Type:** Epoxy phenolic resin

**Filler:** Inert flakes

**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 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>.

#### **Steel**

Steel substrates, which have been previously been used in service, 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 Part 4 and a minimum surface profile @ 60 µm "Medium (G)" as defined in DIN EN ISO 8503-2.

<b>Build-up of the system:</b>	Layer Thickness	Coverage
<b>COROFLAKE 63</b> Resin / Hardener	2 x 200 µm	2 x 300 g/m <sup>2</sup>

<b>Mixing Ratio:</b>	Mechanically premix each component individually prior to blending together. After initial premixing, add hardener to liquid. Mixing ratio 24 : 1 by volume, or 33 : 1 per weight. Mix for two more minutes to ensure that the hardener is well dispersed. Use a low speed mechanical agitator.		
<b>Pot Life:</b>	5 to 6 hrs (+10°C)	3 to 4 hrs (+23°C)	½ hr. (+32°C)
<b>Recoat Time min.:</b>	24 hrs (+10°C)	8 hrs (+23°C)	½ hr. (+32°C)
<b>Recoat Time max.:</b>	72 hrs (+10°C)	48 hrs (+23°C)	30 hrs (+32°C)
<b>Cure Time:</b>	5 to 6 days (+10°C)	3 to 4 days (+23°C)	1½ days (+32°C)
<b>Application Equipment:</b>	Conventional or Airless-Spray equipment		
<b>Application:</b>	<b>Coroflake 68</b> Primer is required for concrete surfaces only. <b>COROFLAKE 63</b> shall be applied in one multi-pass spray coat utilizing an airless or conventional air spray system. Apply two coats @ 250 µm WFT for a total DFT of 300 to 400 µm. The air temperature shall be at +10°C to +36°C and the substrate temperature shall be 3 K above dew point. Observe recoating time.		
<b>Thinning:</b>	May use MEK up to 3 %.		
<b>Clean up:</b>	T-100.		
<b>Shelf Life:</b>	The shelf life is 18 months when stored @ + 25°C if kept tightly sealed. All components should be stored at a cool and dry place.		
<b>Density:</b>	1.25 kg/l (mixed)		
<b>Solid Content:</b>	61 % by volume		
<b>V.O.C.:</b>	2.7 lbs/gal (Lab 23 Method of Reg. 8-4-111 of California Code)		
<b>Flash Point:</b>	+ 16°C mixed (Tag closed Cup)		
<b>Modulus of Elasticity:</b>	1500-2500 MPa (DIN EN ISO 178) flexural		
<b>Coefficient of Expansion:</b>	30x10 <sup>-6</sup> 1/°C (VDE 0304) linear		
<b>Abrasion:</b>	100 mg (ASTM – D 4060)		
<b>Permeation:</b>	0.07 perm inch (ASTM-E96-90) Procedure E		
<b>Adhesion:</b>	7.0 N/m <sup>2</sup> (EN ISO 4624) to grit blasted C-Steel; 1.5 N/mm <sup>2</sup> on concrete		
<b>Hardness:</b>	70 Shore D (DIN 5305)		

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.

TIP TOP Oberflächenschutz Elbe GmbH, Heuweg 4, D-06886 Wittenberg  
 Telefon: (0 34 91) 6 35 – 50, Telefax: (0 34 91) 6 35 – 5 52

TIP TOP Oberflächenschutz Elbe GmbH	COROFLAKE 63	INDEX C of 20.03.2006
Page: 2/2	ATB	Replace Issue of: 13.02.2006