

# TECHNICAL BULLETIN

## COROFLAKE 25

- Product Description:** *COROFLAKE 25* is a two component, inert flake filled, polyester coating system. This coating system consists of one primer @ 50 µm nominal and two coats @ 500 to 700 µm WFT per coat to produce a total DFT of 1000 µm nominal. The polyester resin provides outstanding chemical resistance. The aligned inert flakes make the path of water vapour or other contaminants through the resin much longer. This barrier effect is important for immersion service. Wet stresses above + 50 °C require 3 topcoats.
- Recommended Uses:** *COROFLAKE 25* is so versatile that its uses range from concrete coatings to interior steel tank linings to coating pipeline exteriors. Its primary use, however, has been in protecting against corrosive conditions encountered in oil production, chemical processing, and waste treatment facilities.
- Temperature Resistance:** +70 °C wet +120°C dry
- Generic Type:** Polyester
- Filler:** Micro Mica Flakes
- Solvent:** Styrene (reactive)
- 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 cover 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.

| Build-up of the system:                | Layer Thickness | Coverage               |
|--|-----------------|------------------------|
| <b>COROFLAKE N PRIMER</b> for steel    | 1 x 40-60 µm    | 150 g/m <sup>2</sup>   |
| <b>COROFLAKE N PRIMER</b> for concrete | 1 x 80-120 µm   | 300 g/m <sup>2</sup>   |
| <b>COROFLAKE 25</b> Resin              | 3 x 500-700 µm  | 3,300 g/m <sup>2</sup> |



**Mixing Ratio:** 100 to 2; Primer to HARDENER No.1 and 100 to 1.5 **COROFLAKE 25** Resin to HARDENER No.2 by weight. Mix always hardener into resin based component, using a low speed mechanical agitator.

**Pot Life:** 1½ hrs. (+ 10 °C)                      60 min. (+ 20 °C)                      45 min. (+ 30 °C)

**Application Equipment:** Conventional Air or Airless Spray, Brush and Roller

**Application:** COROFLAKE N PRIMER is normally applied by brush or roller on prepared substrate. **COROFLAKE 25** shall be applied in two coats utilising an airless or conventional air spray system. Small areas may be coated by brush or roller. The substrate and air temperature shall be @ + 10 °C to + 36 °C (3 K above dew point). Primer may be recoated after initial set, which will occur normally after 4 to 6 hours, first coat must be applied within two weeks. The following topcoats should be applied no longer then two weeks later

**Cleaning:** Solvent T-100

**Shelf Life:** The shelf life is 6 months when stored @ + 20 °C.

**COROFLAKE 25** Resin, COROFLAKE N Primer and HARDENER No.1 and HARDENER No. 2 should be stored at a cool and dry place.

**COROFLAKE N PRIMER**

**COROFLAKE 25**

**Density:** 0.96 kg/l (mixed)

1.2 kg/l (mixed)

**Viscosity:** 250 mPas +/- 50

3500 mPas +/- 250

**Solid Content:** 65 ± 2.5% (mixed)

69 ± 2% (mixed)

**Flash Point:** Primer and **COROFLAKE 25**:+ 32 °C; HARDENER No.1: + 70 °C; HARDENER No. 2: +99°C

**Modulus of Elasticity:** 2500-3500 MPa (DIN EN ISO 178) flexural

**Thermal Conductivity:** 0.30 W/m.K (DIN 52612 T1)

**Electrical Conductivity:** < 10<sup>6</sup> Ohm (DIN EN ISO 1081)

**Coefficient of Expansion:** 27-30x10<sup>-6</sup> 1/°C (VDE 0304) linear

**Abrasion:** 78 mg (ASTM -D 4060)

**Permeability:** 0.0014 perm inch (ASTM-E96-90) Procedure E

**Adhesion:** 7.0 N/m<sup>2</sup> (EN ISO 4624) to grit blasted C-steel

**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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