

TECHNICAL BULLETIN

COROFLAKE® 27

SPRAY APPLIED COATING

Product Description: *COROFLAKE® 27* is a two component, inert flake filled Novolac vinyl ester coating system. This coating system consists of one primer and three coats @ 400 - 600 µm WFT per coat to produce a total DFT of 1,200 µm nominal.

COROFLAKE® 27 may be installed without primer when special application conditions are observed.

Recommended Uses: *COROFLAKE® 27* provides the longest lasting, most effective coating system for corrosion prevention in Flue Gas Desulphurization Systems (FGD) and quenches exposed to multiple temperature changes. It has proven performance in Incineration Plants and in the Chemical Process Industry. *COROFLAKE® 27* is suitable for extreme temperature drops up to 15 K/ min.

Temperature Resistance: + 70 °C wet + 170 °C dry

Generic Type: Modified Vinyl Ester

Filler: Inert Flakes

Solvent: Styrene (reactive)

Design: The steel substrate to be coated must be fabricated in accordance with EN 14879-1:2005. Further information can be obtained from our steel specification documents.

Preparation: Steel substrates, which have previously been 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 all cases, steel substrate shall be prepared by abrasive blasting to obtain a Sa 2" surface, as defined in DIN EN ISO 12 944 Part 4 and with a minimum surface profile @ 60 µm "Medium (G)" as defined in DIN EN ISO 8503-2.

Build-up of the system:	<u>Layer Thickness</u>	<u>Coverage</u>
COROFLAKE S PRIMER	1 x 40 – 60 µm	150 g/m ₂
<i>COROFLAKE® 27</i> Resin	3 x 400 – 600 µm	3 x 900 g/m ₂

Mixing Ratio: 100:2 COROFLAKE S Primer or CO ROFLAKE® Resin to Hardener No. 1 by weight. Mix hardener into resin based component, using a low speed mechanical agitator.

Pot Life: 1 ~ hrs. (+ 10 °C) 1 hrs. (+ 20 °C) ~ hrs. (+ 30 °C)

Application Equipment: Conventional Air or Airless Spray.

Application:	Primer is normally applied by brush or roller. Spray application can be used, but requires an extra clean surface. COROFLAKE® 27 shall be applied in three coats utilizing an airless or conventional air spray system. The substrate and air temperature shall be @ + 8 °C to + 36 °C (3 K above dew point). The grit blasted surface must be coated immediately. The following coats can be applied after a minimum of 4 hours but should be applied no longer than three days later. Special instruction for the application of Coroflake 27 without primer. A relative humidity below 40 % must be kept during blasting until the final coat is applied. <i>Note:</i> During application the coated surface must be shaded from direct or indirect sunlight. Otherwise intercoat disbondment may occur.
Cleaning:	Solvent T-100
Shelf Life:	The shelf life is 6 months when stored @ + 20 °C. COROFLAKE® 27 Resin and Hardener No. 1 should be stored in a cool and dry place.
Density:	1.2 kg/l (mixed)
Viscosity:	2,750 mPas ± 250
Flash Point:	COROFLAKE® 27 + 32 °C and Hardener No. 1 + 70 °C
Modulus of Elasticity:	2,500 – 3,500 MPa (DIN EN ISO 178) flexural
Tensile Strength:	48 Mpa (DIN EN ISO 527)
Elongation at Tear:	0.75 % (DIN EN ISO 527)
Coefficient of Expansion:	27 – 30 x 10 ⁻⁶ 1/°C (ASTM D 696-90) linear
Abrasion:	92 mg (ASTM – D 4060)
Permeation:	0.0014 perm-inch (ASTM – E 96 - 90 Procedure E)
Adhesion:	7 N/mm _c (EN ISO 4624) to grit blasted C-Steel
Hardness:	35 Barcol (DIN EN 59)

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