Product Data Sheet

RCC CORROSION CONTROL

COROFLEX LININGS
High Performance Crack-Bridging Lining Systems

PRODUCT DESCRIPTION
COROFLEX LININGS are a series of high performance, crack-bridging systems designed to tolerate crack movement in concrete while providing protection against exposure to corrosive chemicals.

LINING LAYERS COMPOSITION
COROFLEX LINING design consists of an elastomeric basecoat, structural fiberglass reinforcement, and chemical resistant topcoat.
COROFLEX BC is the flexible elastomeric basecoat membrane used in all **COROFLEX LINING** systems. The reinforcement layer consists of fiberglass mat and either an epoxy or vinyl ester resin saturant depending on the specific chemical requirements. Topcoat selection is dependent on chemical resistance and service condition requirements. These include epoxy, epoxy novolac, polyester, vinyl ester and novolac vinyl ester resin based topcoats.

FIELDS OF APPLICATION
COROFLEX LINING systems are typically used to protect concrete structures where crack-bridging and chemical resistance properties are required including secondary containment areas, process floors, tanks, pits, sumps and trenches.

FEATURES
- Very good crack-bridging capability
- Excellent chemical resistance
- Versatile protection - various topcoat options
- Can be applied on horizontal and vertical surfaces

CHEMICAL RESISTANCE
Information on the chemical resistance properties is available upon request.

SURFACE PRE-TREATMENT
Concrete

The concrete shall have a minimum compressive strength of 3500 psi (25 N/mm²) and a minimum surface strength of 200 psi (1.4 N/mm²) for coatings and 300 psi (2.1 N/mm²) for linings. The concrete must be thoroughly cured and dry at the time of application. The residual moisture content should not exceed 4%. ASTM D 4263 plastic sheet test method is recommended to ensure concrete is moisture free. If moisture is detected, repeat test until dry. Abrasive blast or mechanically abrade surface to remove the weak laitance and surface contaminants. Refer to specification, RCC TT-3 for further detail.

APPLICATION
- Prime the prepared substrate with **COROFLAKE 67PS PRIMER** and allow the primer to cure.
- Apply **COROFLEX BC** basecoat by trowel or squeegee in one uniform layer at approximately 40 mils (1000 µm) WFT. **COROFLEX BC HORIZ** is designed for application on horizontal surfaces and **COROFLEX BC VERT** is designed for application on vertical surfaces. Allow the basecoat to cure.
- The subsequent fiberglass reinforcement layer requires either **COROFLAKE 67PS PRIMER** (epoxy) or **COROFLAKE N PRIMER U** (vinyl ester) resin saturant. Other resin saturant types may be required based on chemical exposure conditions. Consult RCC for specific resin saturant selection.
- Apply a uniform layer of resin saturant onto the cured basecoat surface and place the mat. Roll the mat with additional resin until it is fully saturated. Use a ribbed roller to release entrapped air. Repeat if 2-mat layers are required. Allow mat layer to cure.
- Apply the designated Topcoat in accordance with its specific installation procedure document.

Note: During application the lined surface should be shaded from direct or indirect sunlight when possible.

MIX RATIO
Volumetric Mix Ratios: **COROFLAKE 67PS PRIMER Resin** to **Hardener No. 7** is 2:1. **COROFLEX BC Resin** to **COROFLEX BC Hardener** is 1:1.4. **Hardener No.** 1 **Clear** to **COROFLAKE N PRIMER U Resin** is 1.5-2.5 oz. per gallon.

CONSUMPTION

Layer	Thickness mils (µm)	Coverage (mix ratio)
PRIMER COROFLAKE 67PS PRIMER	2-5 (50-125)	160-200 ft²/gal
BASECOAT COROFLEX BC Resin COROFLEX BC Hardener	30-50 (750-1250)	24-40 ft²/gal (1:1.4 resin to hardener) (by volume)
REINFORCMENT LAYER Epoxy Resin Saturant COROFLAKE 67PS PRIMER Resin and Hardener No.7 1.5 oz. mat	35 (875)	30 ft²/gal (2:1 vol, resin: hardener) 1.1 ft²/ft² per layer

Layer	Thickness mils (µm)	Coverage (mix ratio)
REINFORCMENT LAYER Vinyl Ester Resin Saturant COROFLAKE N PRIMER U Resin & Hardener 1 Clear 1.5 oz. mat	35 (875)	30 ft²/gal (1.5-2.5 oz/gal of resin) 1.1 ft²/ft² per layer
TOPCOAT Various options available	Varies	Varies

WORKING TIME

Temperature	Primer	COROFLEX BC
50°F (10°C)	approx. 60 min	approx. 90 min
70°F (21°C)	approx. 40 min	approx. 60 min
90°F (32°C)	approx. 20 min	approx. 30 min

CURE TIME (to place in service)

Temperature	Minimum Cure time
50°F (10°C) 70°F (21°C) 90°F (32°C)	Refer to Topcoat Product Data Sheet for cure times

Generally **COROFLEX LINING** can be placed in service after the final cure time intervals have been achieved. Shorter or longer intervals may apply depending on service conditions. Consult RCC for specific recommendations.

CLEANING: Cleaning Agent T-100

SAFETY MEASURES

The material safety data sheets of the individual components as well as the legal requirements for handling hazardous materials must be observed.

PACKING UNITS

The products are supplied in the following standard package sizes:

Description	Package Size
COROFLAKE 67PS PRIMER	.75, 3, 15, 45 gal kits
COROFLEX BC (Basecoat)	1, 4 gal kits
COROFLAKE N PRIMER U	1, 4, 50 gal kits
1.5 oz. Fiberglass Mat	Sq. ft.

STORAGE

The materials must be stored in a cool and dry place. At storage temperature of 70°F (21°C) the shelf life is as follows:

COROFLAKE 67PS PRIMER Resin 24 months
Hardener No. 7 24 months
COROFLEX BC (HORIZ & VERT) Resin 12 months
COROFLEX BC Hardener 12 months
COROFLAKE N PRIMER U Resin 6 months
Hardener No. 1 Clear 12 months
1.5 oz. Fiberglass Mat Indefinite, if kept dry

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof.

Technical Data	Testing Standard	Unit	Value
Generic Type Basecoat Mat Saturant Resin Topcoat			 modified epoxy epoxy or vinyl ester various resin options
Density - Basecoat	ASTM D1475	lbs/gal kg/l	8.45 ±0.25 1.01
Solids Content - Basecoat		%	95
Tensile Strength – Reinforcement Layer	ASTM D638	psi MPa	10,800 75
Adhesion Strength - Concrete	ASTM D7234	psi N/mm²	Exceeds concrete strength
Elongation - Basecoat	ASTM D412	%	80%
Crack Movement Tolerance (Dependent on Resin Saturant & Topcoat Design)		mils µm	30-60 750-1500
Volatile Organic Compounds (COROFLEX BC)	EPA Method 24	g/L (lbs/gal)	43 (1.19)
Maximum Operating Temperature* Immersion Concrete Splash/Spill Concrete		 °F °C °F °C	 130 54 160 71

***Maximum operating temperature limits may vary depending on actual service conditions**

We warrant that our goods will conform to the description contained in the order and that we have good title to all goods sold. This Product Data Sheet is considered accurate and reliable to the best of our knowledge at the date of its publication, but are used as guides only. The user assumes all risks and liabilities in connection therewith regardless of any suggestion, we may give. We assume no liability for performance of the product or for any loss or damage resulting from its use. Our liability, in law and equity, shall be expressly limited to the replacement of non-conforming goods at our factory, or at our sole discretion, to repayment of the purchase price of the non-conforming goods.