

CONCRETECH

Flex Cement

Positive and Negative Side Waterproof Coating

PRODUCT DESCRIPTION

Flexible Cement Waterproofing (FCW) is an elastomeric, polymer modified cement based membrane for waterproofing concrete structures on the negative and positive side. It is highly flexible, and will bridge concrete cracks of up to 1/8". FCW provides a fast cure and excellent elongation even in extreme cold weather.

USES

FCW is used to water proof concrete structures in new constructions and restorations. It is suitable for waste water tanks, tunnels, concrete slabs, bridges, balconies and patios with light to medium traffic. FCW may be reinforced with Reinforcing Fabric in restoration works over the cracks to provide stronger and more durable bridging. It is approved for potable water tanks with continuous immersion.

PACKAGING

FCW is a two component material consisting of bagged, pre-mixed cement based mortar and a liquid polymer.

LIMITATIONS

Do not apply to poor quality substrate. Do not use FCW when ambient temperature is less than 3°C (40°F) or more than 35°C (95°F) or when temperature is expected to fall below 2°C (36°F) during the first 48 hours after installation. Material and substrate may be conditioned to increase the temperatures to the required range. Maintain the temperature for at least 72 hours.

Uncured FCW exposed to sunshine and shade will create different curing pattern and hardened FCW may not perform as expected.

Concrete surface should be free from any hydrostatic pressure. There are many methods to determine rate of water vapour transmission. Contact Concretech Technical Services if rate of water vapour transmission of the substrate exceeds 5 lbs per 1,000 sq.ft. per 24 hours. Contact Concretech technical services regarding concrete moisture and ways to control it.

INSTALLATION INSTRUCTIONS

All concrete surfaces to receive FCW shall be clean, free of oil, grease, dirt, efflorescence, excess moisture and foreign matter. Concrete surface should be sound, dimensionally stable, fully cured at least 28 days and free from hydrostatic pressure. Clean with commercial degreaser and rinse with plain water. Apply two coats steel primer on any exposed reinforcing steel.

Fill any open cracks longer than 2 mm (80 mils) with patching materials. For cracks less than 1/8" apply a thin coat of FCW 15- 25 cm (6- 10 ") wide, over the crack and lay Reinforcing Fabric on the wet FCW and

tamp in. Apply a second coat of FCW to completely cover the fibre. The amount of total FCW on the crack should not exceed 2mm (80 mils) thick.

Always install test areas to ensure compatibility of the FCW with the substrate, bond strength and the performance. A 16 Kg. (35.3 lb) bag of FCW Powder Component A combined with 4.8 L (5.07 US quarts) Component B polymer covers 90.0 square feet at 1.3 mm (50 mils). Two coats are required for optimum performance.

Mix one bag of FCW powder Component A with the entire contents of FCW Liquid Component B. Mix to a fluid, homogenous state. When poured on the floor mixed material flows very well and provides uniform coverage. FCW Powder Component A should be added gradually while stirring. Use a high speed drill to mix the material at about 600 rpm for 2 to 3 minutes. Lumps will form if FCW Powder is added suddenly into the liquid. Do not over mix. Moving the mixer up and down during the mixing process could cause air entrainment. Air pockets in the mud could shorten the working time and cause pin holing during application and curing. Pour the mud on the prepared substrate evenly. Wet mix on the substrate should flow and level by itself. Shortly after placing the wet mix, use a Gauge Rake to unify to a desired depth and then finish with a brush. FCW can also be applied using trowel or brush on smaller areas. A hopper gun with suitable spray nozzle may be used for faster and more uniform application. When spraying, brushing may be needed to avoid pinholes.

A second coat should be applied within 10-15 minutes, depending on temperature and relative humidity. It is important to apply the second coat not later than 15 minutes after the first coat. If application of the second coat takes longer, it may not bond well to the first coat. Full cure is 5 hours at 23°C (73°F).

Properly mixed FCW should not show any sign of bleed water or phase separation. Work as a team to provide continuous flow of wet mix in a large area. Fresh application must be protected from rain, intense sunlight and strong wind for 12 hours. Avoid walking on the surface for at least 7 hours after installation of FCW. Temperature and humidity play important role on curing and hardening. Do not drive a fork lift over for at least 48 hours after installation. Tools can be cleaned with water immediately after use.

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Flex Cement
Pg. 2

PROPERTIES

Color	Light Grey
Wet Density	1.87 kg/litre
Ph	11
Thickness	1.3 mm (50 mils)/coat
Working Time	15-30 minutes
Full Cure	5 hours @ 23C (73F)
Tensile Strain (ASTM D412 mod, 20C)	20% (without fabric)
Tensile Stress (ASTM D412 mod, 20C)	0.82 MPa (120 psi)
Elongation @ 20 C	> 100%
Water Vapor Permeance (ASTM E96) at 1.7 mm thickness	Wet Cup - 14.5 perms Dry Cup - 3.8 perms

SAFETY PRECAUTIONS

First Aid: Flush contaminated areas immediately and seek medical attention. Remove contaminated clothing. Wash hands with soap and water. Flush eyes with clean water or eye wash solution.

TECHNICAL SERVICES

Complete technical information is available from Concretech Inc. and its authorized applicators and distributors. In house laboratory testing is available for specialty applications. Technical services available in North America call toll free 1.888.503.6780

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