

# CHEMFLEX CM

**2 COMPONENT COPOLYMER MODIFIED CEMENTITIOUS WATERPROOFING COATING / SLURRY**



## PRODUCT DESCRIPTION

CHEMFLEX CM is an Acrylic Copolymer modified cement based waterproofing coating which forms an excellent, flexible and yet tough barrier to water. A two-component system with cement based powder and acrylic copolymer based liquid which when mixed together produces a smooth slurry applied by brush, roller or spray to provide the protection to the substrate against possible ingress of water.

## RECOMMENDED APPLICATIONS

- As a waterproofing layer under tiles in wet areas like bathrooms, kitchens and balconies
- As a waterproofing liner for water tanks, reservoirs, sumps and lift pits.
- As a protective layer for exposed concrete and a surface layering for sealing cracks on concrete surfaces
- As a backing on marbles and granites to prevent ingress of moisture / contaminants
- For waterproofing swimming pools
- As a vapor barrier for façade damp proofing

## PRODUCT FEATURES

- Flexible and Elastic : bridges up to 0.3 mm cracks in concrete, accommodates movements at corners
- Excellent adhesion to surface : Suitable surfaces would be porous and non-porous concrete, block work, brick work, shotcrete.
- Durability : Tough surface with high resistance to weathering effects and UV exposure
- Non Toxic – can be applied to surfaces exposed to clean water
- Resistant to CO<sub>2</sub> and Chloride ion diffusion and micro-organism growth
- Excellent adhesion to subsequent tile work

## APPLICATION TEMPERATURE

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. Recommended guidelines for the application of the coating system is as follows:

## SUBSTRATE PREPARATION

The surface must be clean and structurally sound. Any loose surface should be chipped off and repaired. Sharp edges and protrusions should be levelled off to ensure uniform thickness build up. Use industrial grade detergent or degreasing compounds for removing oil or grease and wax contaminants. Cement laitance, mold release agents, curing membranes and other contaminants must be removed from the surface by shot-blasting, grinding or scarifying followed by vacuum cleaning. The surface to be treated should be pre-saturated with water prior to application. However, any standing water shall be removed prior to application.

## MIXING INSTRUCTION

CHEMFLEX CM is supplied in two pre-measured parts which requires on site mixing. Do not mix more material than what can be used within the pot life. Pour the Part B liquid into a suitable clean container and slowly add half of the Part A powder to the liquid and mix it for 30 seconds using a slow speed drill (300-400rpm) fitted to a proprietary paddle mixer. Pour the balance powder to mix them thoroughly until a homogenous, lump free and creamy consistency is achieved. Allow to stand for 2-3 minutes and remix before application. **DO NOT ADD WATER TO DILUTE THE MATERIAL.**

## PHYSICAL PROPERTIES

Color	Grey
Mixed Density	1.75 ± 0.05
Pot Life	30 min to 1 hour
Touch Dry Time	2 hrs @ 20°C
Ponding Test	After 24 hrs
Service Temperature	-5 to 80 °C ( Surface )

**TECHNICAL DATA**

Description	Test Method	Values
Tensile Strength	ASTM D 412	1.5N/mm <sup>2</sup>
Elongation	ASTM D 412	> 120%
Crack Bridging	ASTM C 836	Up to 2mm
Adhesion to Concrete	ASTM D 4541	1N/mm <sup>2</sup>
Water Penetration	BS EN 12390	Pass
Hydrostatic Pressure @ 5 bar [50m]	BS EN 12390	No leakage
Water Potability	BS 6920	Pass
VOC	ASTM D 3960	<50g/ltr
Toxicity		Non toxic
Foot Traffic		24 hrs
Full Cure		7 days

**APPLICATION PROCEDURE**

The mixed CHEMFLEX CM can be applied onto the prepared substrate using brush, roller or spray. Place the material well onto the substrate to achieve full bond. The application shall be done in minimum of two layers for a 1.5 mm thickness. The first layer in one direction and the second layer in a direction perpendicular to the first layer. The coating can also be applied with by an airless spray of nozzle size of 3-4mm and a pressure of 6-7 bar. After the application of the first coat and whilst the coating is still wet, embed a glass fiber mesh at all corners and other joints for added reinforcement. The second coat shall be applied after the first coat dries off completely (6-8 hours @25°C, 50% RH). For general protection against carbonation and alkali attacks, the coating can be applied in minimum 1mm thickness.

**CURING**

The finished CHEMFLEX CM must be protected from rapid drying. Curing shall be at least 36 hours before trafficking, to yield optimum strength.

**THEORETICAL COVERAGE**

Manual application - 1.8 kg /m<sup>2</sup> / mm thickness  
Spray application – 2 kg / m<sup>2</sup> / mm thickness

**PACKAGING**

20 kg kit  
Part A 15 kg powder  
Part B 5 kg liquid

**STORAGE AND SHELF LIFE**

Store all materials in a covered, cool and dry place on a raised surface, preferably a wooden pallet. Avoid material allowing the material to freeze which will render the material unusable. If stored properly, CHEMFLEX CM has a shelf life of at least 12 months.

**HEALTH AND SAFETY**

Product contains cement, which may cause dermatitis. Wear rubber gloves when handling the product. In case of insufficient ventilation, put on suitable respiratory equipment. Product is classified as non-hazardous. Refer to safety data sheet.

*Above mentioned details and data are given based on the practical experience and applied testing. However as in most case as the application criteria differs from site to site it is required to observe the relevant guidelines and regulations of various organisations and trade associations as well as the respective standards. Warranted properties and possible uses which go beyond those warranted in this information sheet require our written confirmation. All data given was obtained at a specified ambient and material temperature as per standard requirements and are subjected to a tolerance of 10%, unless specified otherwise. Please note that under other climatic conditions hardening can be accelerated or delayed. Whilst Chemcrete’s endeavours to ensure that any advice, recommendation, specification of information it may give is accurate and correct, it cannot, because it has no direct or continuous control over where or how its products are applied, accept any liability either directly or indirectly arising from the use of its products whether or not in accordance with any advise, specification or recommendation of information given by it.*

