

# PRODUCT DATA SHEET



## CM-FLEX Internal

Two pack, flexible, cementitious waterproofing membrane

### DESCRIPTION

CM-FLEX Internal internal is a two pack, flexible, cementitious waterproof membrane designed for waterproofing for most building and construction substrates.

CM-FLEX Internal internal comprises of a liquid component of selected polymers and a powder component of selected cements, fillers and aggregates.

CM-FLEX Internal internal was formulated for demanding waterproof applications including immersed, potable water or ponding situations, positive applications, resistance against hydrostatic pressure, and under-tile substrates.

CM-FLEX Internal internal complies with AS/NZS 4020:2002 Testing of Products For Use In Contact With Drinking Water - Australian Water Quality Centre Report Number 4007/92.1595 and meets the 'Green Star' environmental criteria.

In ponds and water features where an aesthetic appearance is required, CM-FLEX Internal internal can be top coated with VIKIN Rapid WB which is compatible and enhances the performance of the entire waterproofing system.

### USES

CM-FLEX Internal is suitable for many waterproofing applications, but is particularly useful for areas requiring hydrostatic pressure resistance and immersed applications including:

- Water retaining structures such as concrete tanks, reservoirs, ponds, pools, fountains and water features.
- CM-FLEX Internal is suitable for contact with drinking water.
- Basements, foundations and tunnels.
- Positive or negative water pressure waterproofing.
- Retaining walls, planter boxes.
- Under tile waterproofing on balconies, terraces, podiums and decks.

### SUITABLE SURFACES

CM-FLEX Internal is suitable for use on the following correctly prepared surfaces:

Concrete, cement, cement render, polymer render, block work (preferably filled and vibrated to ensure the absence of voids), brick, FC and CFC sheeting, blue board, timber, masonry and metal after application of a suitable metal primer. Suitable for application on damp cementitious surfaces.

### SPECIFICATION

The information contained in this product data sheet is typical but does not constitute a full specification as conditions and specific requirements may vary from project to project. The instructions should be considered as a minimum requirement but the applicator or contractor must use their skill, knowledge and experience to carry out additional works as may be necessary to meet the requirements of the project. Specification for specific projects should be sought from the Company in writing.

### LIMITATIONS

CM-FLEX Internal is flexible and can withstand normal building movement, shrinkage and hairline but it has limited elongation and hence will not tolerate excessive movement or cracking of the substrate. Cracks and gaps must be independently sealed and waterproofed.

### BENEFITS AND ADVANTAGES

Suitable for contact with drinking water.  
Meets the 'Green Star' environmental criteria.  
Very low VOC levels.  
Non-toxic.  
Designed for applications where hydrostatic pressure resistance is required.  
Suitable for immersion in water.  
Two pack yet flexible.  
Quick drying.  
Can be applied to damp surfaces. faster on damp surfaces than CM-FLEX Internal  
Can be topped, tiled or coated.  
Suitable for use in confined areas.  
Compatible with most tile adhesives.  
Can be coated.

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- Can be rendered with a polymer render or standard render with bonding additive.
- Protects concrete against CO<sub>2</sub> degradation.
- Permeable to water vapour and therefore allows substrate to breath.
- Can be used with and without a primer. However, refer to relevant project specifications.

### PRECAUTIONS IN USE

The product is considered low risk if used properly as intended. Observe safety precautions on packaging and MSDS. Powder contains cement and until fully wet the inhalation of powder dust should be avoided and the wearing of a suitable mask is recommended. The use of rubber gloves and eye protection is recommended.

### PRIMING AND SURFACE PREPARATION

Good preparation is essential. Surfaces must be sound, stable, dry, clean and free of dust, loose, flaking, friable material and substances that may diminish adhesion.

- Exposed reinforcing steel must be treated for rust and coated with suitable anti-corrosive and anti-rust treatments (as for concrete spalling).
- Concrete surface that is rough, pitted, contains blow-holes and honeycombed areas must be suitably filled with high tensile strength, non-shrink mortar and allowed to fully cure.
- Block work, which should have been properly filled with concrete and vibrated to ensure that no voids are present within the block work, must be properly pointed up.
- Metal sheeting should be treated for rust and coated with a suitable metal primer.
- Cracks should independently treated and sealed, or opened to a depth of approximately 20mm and 6mm wide and filled with CM-FLEX Internal .

### General

Surfaces must be clean and free of surface imperfections, mould, fungus, contaminants, adhesion reducing substances, waxes, oils, dust, loose particles, gypsum plaster, paint and efflorescence.

### Priming

CM-FLEX Internal can be used without priming. However priming with VIKIN Rapid WB and Rapid WB MC enhances the performance of the entire waterproofing system including its hydrostatic pressure resistance. If priming, then prime with VIKIN Rapid WB MC (preferably) or VIKIN Rapid WB applied at no less than 1 litre per 3m<sup>2</sup>

and allowed to dry. Excessively porous, friable and dusty surfaces may require an additional priming coat. The primed surfaces should have a solid, opaque appearance. Please refer to the product data sheets of the stated primer. Allow primer to fully dry.

Alternatively, T10flex liquid diluted 10% with clean water may be used as a primer for non-critical or undemanding applications (although Rapid WB is preferred) applied at 3 to 4 m<sup>2</sup> per litre and allowed to dry. Note that this method does not provide hydrostatic or evaporation of entrapped moisture from the substrate protection.

Timber (particularly particle board which should receive two priming coats), roofs and negative surfaces must be primed with VIKIN Rapid WB.

VIKIN Rapid WB may be applied to damp surfaces (but free from ponded or running water) which must become dry to allow the product to dry.

### DETAILING PREPARATION

#### Corners

Apply an adequate flexible polyurethane sealant, in accordance the manufacture's instruction and tool off to form a solid, coved or 45° fillet extending at least 10mm on to the adjacent surfaces. Apply the VIKIN membrane directly over the sealant and on the adjacent surfaces.

Alternatively, to corners of large cementitious tanks a high tensile strength, non-shrink mortar or VIKIN Sealant should be applied to form a fillet thereby eliminating 90 degree angles.

### Joins, Gaps and Cracks

#### General

Joins, gaps, cracks and around penetration should be suitably filled and sealed with an appropriate elastomeric sealant, preferably a polyurethane sealant, and allowed to cure.

**Recommendation:** The movement of small cracks should not be underestimated and should be at least covered with a flexible polyurethane sealant or additional coats of membrane.

### Large or Live Cracks

- Large cracks should be routed out to form a 'V' and then filled and sealed with a polyurethane waterproof joint sealant as per the manufacturer's instructions. The sealant should be finished slightly proud of the surface and allowed to cure.
- Alternatively, rout out to a depth of 20mm and 6mm wide and fill with CM-FLEX Internal. Note: The cracks movement must not exceed the elongation tolerances of the membrane.
- Over these areas the membrane should be used in conjunction with a reinforcing fabric (VIKIN Primer 15), i.e. embed the Primer 15 in to the first membrane coat and then apply a top saturating coat. Allow to dry. Then apply 2 to 3 further coats over the Primer 15 extending at least 150mm other side on to the substrate.

### Joins - Particularly in CFC Sheeting and Timber Sheeting

Ideally the sides of the sheets should be fully coated with a flexible polyurethane waterproof joint sealant prior to butting the sheets together.

If not, the joins should be suitably filled and sealed with an appropriate elastomeric polyurethane waterproof sealant and finished flush with or preferably slightly proud of the surface and allowed to cure.

After priming, as required, lay a strip of VIKIN Leak-Seal Tape over the join, pressing it firmly on to the substrate. The VIKIN membrane is then be applied as described under 'Large or Live Cracks'.

## APPLICATION

### Mixing

Mixing should be done with a mechanical stirrer - hand mixing is not recommended. Whilst stirring, the powder should be slowly added to the liquid. Stir until the mix is smooth, lump free and homogenous. The mixing ratios should be as supplied.

If mixture sets before use, do not try to reconstitute by adding water or more liquid. This product should be discarded.

Application is usually by brush or roller. The final dry film thickness should be at least 1.5mm to 3mm depending upon the waterproofing requirement applied. Each coat should be applied at approximately 1mm wet film thickness - in 2 to 3 coats approximately 1 day apart

(maximum 3 days). If no primer has been used then lightly pre-dampen the substrate with clean water. Allow previous coat to fully cure / dry before applying the next. In confined areas such as tanks, the humidity in the tank may inhibit proper curing and artificial ventilation (preferably warm air) should be blown into the tank.

## Application

Small ponds, fountains, retaining wall, roofs, concrete slabs: Apply a minimum of two coats to give a dry film thickness of at least 2.0mm.

Large tanks: Apply a minimum of three coats to give a dry film thickness of at least 2.5mm.

Swimming pools: Apply a minimum of three coats to give a dry film thickness is at least 3.0mm. The membrane should be suitably rendered with a suitable bonding agent incorporated in the render than tiled with a tile adhesive designed for immersion.

## COVERAGE

The stated average coverage rate may vary depending upon type, condition, porosity, texture of the surface and application technique.

Usually 1 kg per m<sup>2</sup> per coat applied in a minimum of 2 coats and 3 for demanding applications, i.e. a 30kg kit will cover 30m<sup>2</sup> per coat.

## COLOURS

CM-FLEX Internal is dark greyish in colour.

**Hint:** Where an aesthetic colour is required, CM-FLEX Internal can be top coated with VIKIN Rapid WB which is available in off-white or black which are compatible and enhances the overall waterproofing system and provides a pleasing finish.

## DRYING AND CURING

Drying and curing of the product is affected by type, dryness and porosity of the surface, temperature, humidity, ventilation, climate conditions and application technique and therefore drying and curing can only be given as a guide.

Typically at 23°C and RH of 50%:

**Touch dry:** 2 to 4 hours.

**Set:** 4 to 6 hours.

**Dry / cure:** 12 to 24 hours.