



# Membryl<sup>®</sup>

UV stable waterproofing membrane.

## DESCRIPTION

Membryl<sup>®</sup> is a waterborne elastomeric waterproofing membrane with outstanding long-term UV stability. Membryl<sup>®</sup> is an effective anti-carbonation membrane for concrete as it exceeds the “Klopfers Criterion” requirements of  $S_d < 4m$  and  $R > 50m$ .

## ADVANTAGES

Membryl<sup>®</sup> delivers the following advantages;

- Seamless waterproofing system - liquid applied with no joints or laps, not allowing ingress of water or contaminants.
- Elastomeric, even after weathering.
- Anti-carbonation protection of concrete.
- Tough and trafficable - high tensile strength and hardness.
- Allows substrate to breathe.
- Fungal and algal resistant - an extended life and clean appearance in high humidity environments.
- Fire and flame resistive.
- Chemical attack resistive.
- Excellent resistance to dirt pick up.
- Very high adhesive strength.
- High build - bridges fine cracks.
- Resistive to impact and light traffic damage.
- Weatherproof and lightfast.
- Not suitable for use in areas of permanent water immersion.

## AREAS OF USE

Membryl<sup>®</sup> is suitable for use in the following areas;

- Concrete Roof Areas
- External Walls
- Balconies
- Parapet Walls
- Decks

## SUBSTRATES

Membryl<sup>®</sup> is suitable for application on;

- Concrete & Brick
- Timber
- Plywood Sheeting
- Metal Sheeting
- Structural Screeds

## TESTING APPROVALS AND STANDARDS

Membryl<sup>®</sup> is compliant with the following standards;

- Green Star - Design & As Built v1.1: Indoor Pollutants 13.1 Paints, Adhesives, Sealants and Carpets.
- APAS 181 – V.O.C limits.
- AS4654.1 Waterproofing membrane systems for exterior use – Above ground level, Part 1: Materials.

## TECHNICAL DATA (@ 25°C)

|                      |                             |
|----------------------|-----------------------------|
| Number of Coats:     | Refer Specifications Below  |
| Coverage: (per coat) | Refer Specifications Below  |
| Wet Film: (per coat) | Refer Specifications Below  |
| Recoat:              | 4 – 6 h                     |
| Full Cure:           | 7 days                      |
| Colour:              | White, Off White, Gull Grey |
| Clean Up:            | Water                       |
| Shelf Life:          | 12 months                   |

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## TEST DATA

| Properties                                           | Measurement / Standard            | Test Results                                              |
|------------------------------------------------------|-----------------------------------|-----------------------------------------------------------|
| VOC Content                                          | ASTM D-2369                       | 10g/L (Low)                                               |
| Tensile Strength:                                    | ASTM D412                         | 3.66MPa                                                   |
| Elongation:                                          | ASTM D412                         | 140%                                                      |
| Durometer Hardness                                   | ASTM D2240                        | Durometer "A" Value 78.5                                  |
| Direct Tension Adhesion Strength                     | ASTM D4541                        | 2.0 MPa                                                   |
| Mandrel Bend Test (6mm)                              | AS1580.402 / ISO 1519             | Pass-no cracking, flaking or peeling observed.            |
| Water Vapour Transmission                            | ASTM E96                          | 35.6g / m <sup>2</sup> / 24 hours                         |
| Permeance                                            | ASTM E96                          | 1.47 x 10 <sup>-7</sup> g / Pa.s.m <sup>2</sup>           |
| Moisture Vapour Diffusion Coefficient (DH20)         | ASTM E96                          | 4.3 x 10 <sup>-5</sup> cm <sup>2</sup> sec <sup>-1</sup>  |
| Moisture Vapour Diffusion Resistance Coefficient (μ) | ASTM E96                          | 5920                                                      |
| Moisture Vapour Equivalent Air Layer Thickness (Sd)  | ASTM E96                          | 1.21m                                                     |
| Oxygen Diffusion Coefficient                         | Taywood in-house test method      | 2.9 x 10 <sup>-7</sup> cm <sup>2</sup> sec <sup>-1</sup>  |
| Carbon Dioxide Diffusion Coefficient                 | Section 5.4                       | 4.9 x 10 <sup>-7</sup> cm <sup>2</sup> sec <sup>-1</sup>  |
| Diffusion Resistance Coefficient (μ)                 | (Gas Dispersion Test)             | 305800                                                    |
| Equivalent Air Layer Thickness (R)                   |                                   | 64m                                                       |
| Equivalent Thickness of Concrete (Sc)                |                                   | 16cm                                                      |
| Chemical Resistance                                  | Taywood in-house test method      |                                                           |
| 10% W/V Sodium Hydroxide                             | (as nominated)                    | 1 hour – temporary effect<br>3 hours – temporary effect   |
| 10% W/V Nitric Acid                                  |                                   | 1 hour – no visible change<br>3 hours – no visible change |
| Fire Propagation                                     | B.S. 476: Part 6                  | 3.3 Fire Propagation Index                                |
| Surface Spread of Flame                              | B.S. 476: Part 7                  | Class 1                                                   |
| Resistance to Artificial Weathering                  | AS 1580.483.2                     |                                                           |
| 1000 hours                                           |                                   | Satisfactory – no defects                                 |
| 4000 hours                                           |                                   | Satisfactory – no defects                                 |
| Biological Resistance                                | Thor In-house Accelerated Testing |                                                           |
| Fungal – 1 month (accelerated)                       |                                   | Excellent Film Fungal Protection                          |
| Algal – 6 months (accelerated)                       |                                   | Excellent Film Algal Protection                           |
| Abrasion Resistance                                  | ASTM D1242                        | 0.18mm                                                    |

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## SPECIFICATIONS

Waterproofing reinforced trafficable;

|                                     | Spreading Rate       | W.F.T. | D.F.T. |
|-------------------------------------|----------------------|--------|--------|
| 1 <sup>st</sup> Coat - Membryl®     | 1.6m <sup>2</sup> /L | 625 µm | 300 µm |
| Whilst wet embed Crommelin® Polyfab |                      |        | 40 µm  |
| 2 <sup>nd</sup> Coat - Membryl®     | 1.6m <sup>2</sup> /L | 625 µm | 300 µm |
|                                     |                      |        | 640 µm |

Anti-carbonation weatherproof membrane;

|                                 | Spreading Rate       | W.F.T. | D.F.T. |
|---------------------------------|----------------------|--------|--------|
| 1 <sup>st</sup> Coat - Membryl® | 4.8m <sup>2</sup> /L | 210 µm | 100 µm |
| 2 <sup>nd</sup> Coat - Membryl® | 4.8m <sup>2</sup> /L | 210 µm | 100 µm |
|                                 |                      |        | 200 µm |

## ANCILLARY PRODUCTS

- Crommelin® Hybrid MS Polyurethane Sealant – 600ml
- Crommelin® Silicone & Bond Breaker Sealant – 300ml
- Crommelin® Polyfab – reinforcing fabric
- Crommelin® Polyfab BB – bond breaker
- Crommelin® Contractor Membrane Applicator Brush – 100mm, 75mm
- Crommelin® Contractor Membrane Roller Cover – 230mm
- Crommelin® Moisture Meter

## SUBSTRATE PREPARATION AND PRIMING

Full substrate preparation instructions can be found at [www.crommelin.com.au/full-instructions/](http://www.crommelin.com.au/full-instructions/)

- Surfaces must be clean, dry, sound and free from dust, grease, curing compounds, release agents, loose particles, efflorescence, concrete laitance or any other contaminants.
- Exposed reinforcing bars are to be cleaned of rust prior to repair.
- If cementitious repair products are used, they should be cured for a minimum of 7 days, however 28 days is preferable.
- Remove contaminants such as grease and oil with Crommelin® HD Cleaner. Remove dust, loose dirt, flaking paint, rust etc. as appropriate by high pressure water jetting, abrasive blasting or mechanical/hand wire brushing.
- Substrates that are porous and/or slightly dusty should be primed with a 2:1 dilution of Membryl and water.
- Painted areas should be checked for soundness. Remove loose paint and prime area with Crommelin Next Day SB. Allow to dry for 24 hours.
- Cracks or joints displaying non-active cracks wider than a hairline should first be filled with proprietary filler.
- All active cracks and expansion or construction joints are to be cleaned to accommodate a backing rod combined with proprietary elastomeric filler.

**Note: Due to the wide variety of substrates available, adhesion testing is recommended in a trial area before full application.**

- If substrate is not dry, prime surface with Crommelin® WB2K®.

## APPLICATION CONDITIONS

- Substrate must be dry, with less than 15% moisture content. The use of suitable moisture meter is recommended.
- Application temperature between 7°C - 35°C.
- Do not apply if relative humidity is above 85% during initial cure phases, or if rain is expected before cure.

**Note: In humid conditions, air flow should be maximised with the use of fans to assist cure.**

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## APPLICATION

Full application instructions can be found at [www.crommelin.com.au/full-instructions/](http://www.crommelin.com.au/full-instructions/)

- Apply Crommelin® Polyfab BB or Bond Breaking Sealant to internal angles/corners (wall & floor junction) and vertical angles/corners (wall & wall junction) as per standard.
- Apply Membryl® with Crommelin® Contractor Membrane Brush, Crommelin® Contractor Roller or similar.
- Apply first coat of Membryl® as per recommended coverage rate. Work from corners to central areas and allow to dry.
- If only a bond breaking sealant has been used, it is recommended to install Crommelin® PolyFab Reinforcing Fabric to all joints and corners in conjunction with first coat of Membryl®.
- Apply second coat of Membryl® as per recommended coverage rate, at 90° to the first coat.
- Pre-Existing sealants/mastics - in general Membryl can be directly applied to most mastics, however, non-paintable silicones are not suitable. If it is silicone or it cannot be identified, apply Crommelin Polyfab BB over the area as detailed above, before treating with Membryl®.
- Upright angles and protrusions - sharp corners formed by vertical and horizontal junctions such as parapets and pipes, etc. should be detailed in a similar fashion with Crommelin Polyfab BB as detailed above.
- The ends of vertical membranes should be protected to avoid ingress of water behind the membrane.
- On parapet walls, if possible, the membrane should be carried to the top and slightly down on the other side thus eliminating water ingress.
- On high vertical walls or protrusions, the horizontal membrane should be turned up approximately 200mm and applied into a reglet (5mm wide and 10mm cut) and / or covered with a down-turned protective flashing.
- A non-slip finish can be achieved by applying a third coat at 1.6m<sup>2</sup> / L with Crommelin® Silica 300 Aggregate mixed in at 400g / 15L.

## CLEAN UP

- Uncured material may be removed with warm water and detergent.
- Cured material may be removed mechanically.
- Cured material may be softened by soaking in Crommelin® HD Cleaner before attempting removal.

## MAINTENANCE SCHEDULE AND REPAIR

- Membryl® must be protected from damage by after trades and inspected prior to the application of any over coat.
- Moisture blisters and bubbles may be repaired by cutting out the affected areas, allowing substrate to properly dry and reapplication of membrane as per recommended coverage rates.
- Protect membrane from harsh chemicals, abrasion and other potentially damaging conditions.

## PRECAUTIONS

- Do not apply if the temperature is below 7°C or relative humidity is above 85% or if rain is imminent.
- Do not allow ponding to occur between coats or before system is fully cured (normally 7 days after application of final coat). Water should be swept off or mopped during curing period to avoid damage.

## WARRANTIES

A standard warranty period of 10 years is offered for Crommelin® Membryl®.

Extended warranties are available for project specific applications. Please contact your Crommelin® representative, or the Crommelin® technical support team for detailed specifications applicable to your project and warranty requirements.

## TRANSPORT AND STORAGE

- Size: 15L
- Weight: 22.5kg
- DG Class: N/A
- Flash Point: N/A
- UN Number: N/A
- Cool and Dry Storage

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## SAFETY AND FIRST AID

Membryl® Safety Data Sheet is available from Crommelin® upon request.

### Safety

- Ensure good ventilation and avoid breathing vapours.
- Avoid skin and eye contact. Wear gloves and eye protection. Remove splashes on skin immediately and remove contaminated clothing.
- Keep out of reach of children.
- Keep container sealed when not in use.
- Do not swallow.

### First Aid

- If poisoning occurs, contact a doctor or poisons information centre: Ph. 13 11 26.
- If swallowed, do not induce vomiting. Give a glass of water to drink.
- If in eyes, hold eyes open and flood with water for at least 15 minutes.
- If not breathing, apply artificial respiration.

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Any advice, recommendation, information, assistance or service provided by Crommelin® in relation to its products or their use is given in good faith, however is provided without responsibility or liability.

Customers need to undertake their own assessment to determine the suitability of a product for the intended use. As the performance of any product is subject to a wide variety of different surface types as well as environmental and surface-specific conditions, it is essential that a sample of the product be applied to the intended area of use to ensure it is acceptable in appearance and finish and that it performs as required on the specific surface.

Crommelin® also reserves the right to update information without prior notice, to reflect ongoing research and product development.

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