

ALDRIDGE

Aldridge Corporation Pty. Ltd.

High Performance Membranes

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HPM-PU

POLYURETHANE WATERPROOFING MEMBRANE FOR NON-EXPOSED AREAS

DESCRIPTION

HPM-PU is a single pack, liquid applied, moisture curing, waterproofing membrane which cures to form a tough, seamless, durable, and elastomeric (class III) waterproofing membrane. **HPM-PU** will bond well to most suitably primed building substrates. It is suitable for above and below ground applications.

HPM-PU meets the criteria of:

- AS4858:2004 Wet Area Membranes.
- AS4654.1 2012 Waterproofing membranes for external above ground use. Exposed areas must be topped with HPM-Top Coat
- AS3740:2010 Waterproofing of Domestic Wet Areas.
- The 'Green Star' environmental criteria.

USES

Suitable Surfaces

HPM-PU has been formulated for most waterproofing applications requiring long term waterproofing for Non-UV exposed waterproofing applications making it ideal for:

- Balconies
- Terraces
- Decks
- Podiums
- Tiled or covered areas
- Roofs (non - exposed)
- Roofs (exposed) when top coated with **HPM-Top Coat**
- Retaining walls
- Planters and landscaped areas
- Structural slabs
- Pits and bunded areas
- Door flashing
- Concrete
- Cement and cement render
- FC and CFC Sheeting
- Block & Brick work
- Masonry/Stone
- FC, CFC, asbestos and Blue board sheeting
- Scyon & composite sheeting
- Metal (when primed with **HPM-Hydrostop**)
- Timber, Particle Board, Plywood (when primed with **HPM-Hydrostop**)*
- Masonite
- Plaster board

***Note:** Particle Board is not regarded as a suitable substrate for wet areas and particularly shower recesses and should be replaced with CFC sheeting. As a minimum, Particle Board should be sealed with one to two coats of **HPM-Hydrostop**. All joints and corners must be sealed with a polyurethane sealant used in conjunction with the membrane. Surfaces must be made good and should be sound, stable, dry, clean, and free of dirt, dust, and contaminants and suitably primed.

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Benefits and Advantages

HPM-PU represents the highest standards in polyurethane waterproofing technology and provides the following benefits and advantages:

- Single pack (no mixing) easy to apply anti-sag technology, up to 0.75mm
- Rapid cure (within 24 hours)
- Low VOC levels. Meets the 'Green Star' environmental criteria.
- Permanently flexible (tests show flexibility 360%-Class III)
- Bitumen and tar free will not stain grout or tiles.
- Self-leveling 100% bonded seamless membrane (no joints or laps)
- Formulated for wet area and under tile use.
- Safe to use.
- Excellent chemical & hydrostatic resistance
- Overcoat with **HPM-Top Coat** for trafficable areas or UV protection.
- It meets the Class III High Extensibility classification of AS4654.1 2012.
- Can be installed in accordance with AS3740:2010 wet area and AS4654.2 exterior, in exposed membrane applications in conjunction with **HPM-Top Coat**.
- Does not re-emulsify once fully cured, long term performance.
- Tough, Durable, and flexible
- High strength and puncture resistant
- Easily repaired and or maintained
- Easy to apply
- Odourless when cured
- Formulated to provide long term protection
- Inhibits mould and biological growth
- Australian Made and a long history of Australian use

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. 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

- **HPM-PU** is not designed for long term direct exposure to UV and should be covered within six weeks.
- **HPM-PU** is not designed as a trafficable membrane although infrequent maintenance foot-traffic is acceptable during the construction phase.
- **HPM-PU** is not suitable for direct and prolonged contact with concentrations of chlorine above 10 ppm.
- Direct tile adhesion is not advised. Please note for direct tile bond applications seek Aldridge technical advice.
- **HPM-PU** cannot be applied directly to damp surfaces as this will cause gassing and bubbling of the membrane.
- In exposed areas, **HPM-PU** must be coated with **HPM-Top Coat** or covered.
- **HPM-PU** cannot be applied to slightly damp surfaces the product will not adhere. The surface must dry before the membrane can be applied, freedom from surface water and continual dampness is essential.



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Precautions in Use

Risk is considered low when used correctly. Precautions on the pail label and safety data sheets should be observed.

Use in well ventilated areas. Uncured product is combustible so keep all sources of ignition away from product and its vapors.

Priming

Surfaces should ideally be suitably primed with **HPM-Hydrostop** applied at no less than 1L per 3m² or applied at or HPM-Pu Primer at 1L m² and allowed to dry. Primers need to be applied at no less than the relevant Aldridge Corporation TDS.

If there is a risk of entrapped moisture in the substrate which may cause the membrane to bubble or outgas, two coats of **HPM-Hydrostop** should be applied.

Excessively porous, friable, and dusty surfaces may require an additional priming coat.

Application

Apply HPM-PU by brush roller, or squeegee (if using a squeegee it must be backrolled in a minimum of two coats, usually a day apart so that the dry film thickness is 1.2mm. The minimum wet coat thickness per coat is 0.667mm. The second coat is best applied within 36 hours to achieve inter-coat adhesion bonding and avoid the need to reprime.

General

Apply **HPM-50FC** (a flexible polyurethane sealant) and tool off to form a solid covered 45° fillet extending 10mm on to the adjacent surfaces. Allow to cure. Apply the Duram membrane directly over the sealant and on the adjacent surfaces.

Water Resistant Applications:

Apply **HPM-PU** by brush, roller, broom, or squeegee to a dry film thickness 0.5 mm DFT. The minimum wet coat thickness is 0.6mm.

Single Coat Application:

In ideal conditions - Warm, dry weather, the membrane may be applied in a single coat after correct priming and at prescribed coverage rate and dry film thickness as for 2 coats. The membrane should be monitored to ensure bubbling, pin holing or damage does not occur. If this occurs, the wet membrane should be lightly over-rolled.

HPM-Top Coat is an aliphatic polyurethane topcoat which extends the life of the exposed membrane by providing UV protection.

When top coating **HPM-PU**, with **HPM-Top Coat**, allow **HPM-PU** to cure and then apply **HPM-Top Coat** at the approximate rate of 3 to 4 m² per Lt.

Coverage

Coverage rate varies depending upon type, condition, porosity, texture of the surface and application technique.

1.5 Litres per m² for two coats combined, i.e. 0.75 Litres per m² per coat. Ensure that the DFT of the cured **HPM-PU** is 1.0mm for horizontal surfaces (minimum thickness per coat is 0.66mm WFT) and 1.0mm for vertical surfaces (0.55mm WFT).



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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.

Generally, **HPM-PU** is touch- dry within 4 to 6 hours with full cure within 24 hours. Recoat between 6-24 hours.

Tiling, Topping or Top Coating

HPM-PU must be covered.

For Tiling – topped with a bedding of sand /cement screed. Acrylic bonding agents can be used in conjunction with sand/cement screed mixes for better strength and adhesion properties. When tiling, it is essential that adequate expansion joints are installed in accordance with good tiling practice, AS3958.1- 2007.

Covered Roofs – cover with protection sheeting, Geo Textile (drainage cell) pebbles.

Ground Works/Landscaped Areas – cover with protection sheeting and drainage cell prior to gravel drainage -clean fill.

Colours

Grey. Colour may lighten after application in direct sunlight. Note: Slight Colour variation may occur between batches.

Clean Up

Avoid spills. They are difficult to clean particularly on porous surfaces. On concrete and non-porous surfaces for wet spills use a cloth and **Xylene**. Do not clean off carpets as it is better to allow product to cure and then shave the carpet. Equipment should be immediately cleaned with Xylene

Storage and Packaging

Keep in cool, dry place away from heat, flame, or combustible material. Product contains flammable solvents. Available in 15 Lt pails, 15 Litres of **HPM-PU** equates to 19.5kg.

Shelf life: 6 months in unopened container, best used within that period. As this is a moisture curing polyurethane some skinning of the product may occur. This should be cut out and removed. Balance of the product will be suitable for use.

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Safety and precautions

HPM-PU is solvent based. Keep container in safe, ventilated area. Wear appropriate PPE during use. The use of solvent resistant gloves and goggles (against splashes) are recommended. If spraying, which is very rare, the use of self-contained breathing apparatus is recommended. If swallowed do not induce vomiting, give plenty of water to drink. Seek urgent medical advice. If in eyes, flush thoroughly with clean water, holding lid open to ensure any trapped product may be flushed away. Seek medical assistance. If on skin, remove contaminated clothing and wash skin with soap and water. This may not remove the product but will encourage it to cure and can later be peeled off. If inhaled, unlikely due to viscosity of the product, remove person to fresh air and apply artificial respiration if required and seek urgent medical attention. Ensure adequate ventilation. Vapours may collect in low lying areas. For full safety data refer to the SDS. Observe precautions on the label.

Tests and Technical DATA INFORMATION

HPM-PU represents the highest standards in Cross Linked Moisture curing Polyurethane waterproofing technology.

1. **HPM-PU** meets the Class III High Extensibility classification of AS4654.1 2012 as tested by BRANZ.
2. **HPM-PU** formulation complies with AS4654.1 2012.
3. AS3740-2010 Waterproofing of domestic wet area.
4. AS4858:2004 Internal Wet Area membranes (Non-UV exposed applications).
5. 'Green Star' environmental criteria (Less than 120 grams per Litre).

Tensile Strength	1.18 MPa 363% Elongation
Application/surface temperature range	10°C to 35°C Substrate Surface Temperature
Elongation	> 360% (Class III Extensibility)
Moisture Vapour Transmission	12.83g/m ² /24 hours

Conditions of Use and Disclaimer

The information contained in this TDS is given in good faith based upon our current knowledge and does not imply warranty, express or implied. The information is provided and the product is sold on the basis that the product is used for its intended purpose and is used in a proper workmanlike manner in accordance with the instructions of the TDS in suitable and safe working conditions. Under no circumstances will the Company be liable for loss, consequential or otherwise, arising from the use of the product.

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