



# MULTITHANE HV

POLYURETHANE WATERPROOFING MEMBRANE FOR NON-EXPOSED AREAS

## DESCRIPTION

**Multithane HV is a Cross Linked Moisture curing Polyurethane single pack liquid applied waterproof membrane.**

Multithane HV is a single pack, liquid applied, moisture curing, high build, waterproofing membrane which cures to form a tough, seamless, durable, and elastomeric (class III) waterproofing membrane. Multithane HV bonds well to most suitably primed building substrates. It is suitable for above and below ground applications.

Colour: Grey.

Multithane HV 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 **Multithane ATC**.
- AS3740:2010 Waterproofing of Domestic Wet Areas.
- The 'Green Star' environmental criteria.

Multithane HV is one of three versions within the Multithane range which include: **Multithane UVR** (UV resistant) and **Multithane STD** (self-levelling). Please refer to these product data sheets for more information.

**The Duram Polyurethane Range of products has been an industry leader for over 30 years.**

## USES

## SUITABLE SURFACES

**Multithane HV 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 **Multithane ATC**
- Shower recess & wet areas (floors and upturns).
- Retaining walls
- Planters and landscaped areas
- Structural slabs
- Water retaining structures (e.g. tanks)
- Pits and bunded areas
- Door flashings
- Concrete
- Cement and cement render
- FC and CFC Sheeting
- Block & Brick work
- Masonry/Stone
- FC, CFC, asbestos and Blue board sheeting
- Particle board (see notes below) \*
- Scyon & composite sheeting
- Acrylic coatings
- Vitreous, ceramic & terra cotta tiles
- Bitumen (when primed with **Duram Primeseal MC**)
- Metal (when primed with **Duram ME Primer / Primeseal MC**)
- Timber, Particle Board, Plywood (when primed with **Duram Primeseal MC**) \*
- Masonite
- Plaster board
- Extruded foam
- Fibreglass/Gelcoat/PVC

Advice from Duram should be sort for the most appropriate priming method for these surfaces; Duram has a recommended system for all of the above.

**\*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 Duram Primeseal MC. All joins and corners must be sealed with a polyurethane sealant and a reinforced fabric 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.

## BENEFITS AND ADVANTAGES

**Multithane HV 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 1.5mm
- Rapid cure (within 24 hours)
- Low VOC levels. Meets the 'Green Star' environmental criteria.
- Permanently flexible (tests show flexibility < 500% - Class III)
- Bitumen and tar free will not stain grout or tiles.
- Bonded seamless membrane (no joints or laps)
- Suitable for immersion in water
- Formulated for wet area and under tile use.
- Safe to use.
- Overcoat with **Rocktuff** for trafficable areas or **Multithane ATC** for 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 **Multithane ATC**.
- Does not re-emulsify once fully cured, long term performance.
- Suitable for permanent immersion and the most demanding waterproofing applications
- Excellent chemical & hydrostatic resistance
- 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

- Multithane HV is not designed for long term direct exposure to UV and should be covered within six weeks.
- Multithane HV is not designed as a trafficable membrane although infrequent maintenance foot-traffic is acceptable during the construction phase.
- Multithane HV 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 Duram technical advice.
- Multithane HV cannot be applied directly to damp surfaces as this will cause gassing and bubbling of the membrane.
- In exposed areas, Multithane HV must be coated with **Duram Multithane ATC** or covered.
- Multithane HV 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.

## 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 vapours.

## 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.

### **Blowholes.**

Blowholes and surface imperfections must be made sound and filled with **Duram Resiflex Hybrid** or **Resiflex FC** sealant or alternatively a non-shrink mortar, finished flush with the surface. Allow to cure and dry.

## PRIMING

Surfaces should ideally be suitably primed with **Duram Primeseal MC** applied at no less than 1 Lt per 4m<sup>2</sup> or **Duram Primeseal SP** applied at 1Lt per 7m<sup>2</sup> and allowed to dry. Primers need to be applied at no less than the relevant Duram Primer TDS.

**Duram Azcoseal / Multiseal** may be used in areas where the moisture content of the surface is low, applied at no less than 1 Lt per 4m<sup>2</sup>.

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

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

Metal surfaces must be clean and free of contaminants and then apply **Duram ME Primer**. If rusted, treat to remove rust, apply a rust converter, and then apply **Duram ME Primer**.

Other Duram primers suitable for use with Multithane HV include **Multiseal** and **Superprime 711**.

Allow primers to touch dry before applying the membrane and refer to the TDS of the relevant primer.

## DETAILING PREPARATION

### Corners

Prime as required.

### General

Apply **Duram Resiflex Hybrid** or **Resiflex FC** (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.

**For Additional waterproofing protection or expansion joint requirements the following additional steps may be taken.**

Lay a strip of **Duram Leak-Seal Tape** (self-stick, butyl mastic waterproofing membrane with a polyester backed reinforcing fabric) over the cured polyurethane sealant pressing it firmly on the surface. Apply the Duram membrane directly over the tape and on the adjacent surfaces.

### Joints, gaps, and Cracks

#### General

Joints, gaps and cracks should be filled and sealed with **Duram Resiflex Hybrid** or **Resiflex FC** and allowed to cure.

Recommendation: The movement of small cracks should not be underestimated and must be covered with a flexible polyurethane sealant and an additional coat of Multithane HV.

#### Large or Live Cracks

Large cracks should be routed out to form a 'V' and then filled and sealed with **Duram Resiflex Hybrid** or **Resiflex FC** joint sealant, as per the TDS. The sealant should be finished slightly proud of the surface and allowed to cure.

After priming, lay a strip of **Duram Leak-Seal Tape** over the joint or crack pressing it firmly on to the substrate. Apply Multithane HV directly to the **Duram Leak-Seal Tape** and extending at least 75mm on to the adjacent surfaces.

#### Joints - Particularly in CFC Sheeting and Timber sheeting

The sheets should be fully coated with **Duram Resiflex Hybrid** or **Resiflex FC**. Butter the edges of each sheet prior to butting the sheets together.

Alternatively, the joints should be suitably filled and sealed with **Duram Resiflex Hybrid** or **Resiflex FC** and finished slightly proud of the surface and allowed to cure.

After priming, lay a strip of **Duram Leak-Seal Tape** over the joint, pressing it firmly on to the substrate. Apply Multithane HV directly to the **Duram Leak-Seal Tape** extending at least 75mm on to the adjacent surfaces. If the **Duram Leak-Seal** is not used, then follow the procedure as described under 'Large or Live Cracks'.

#### Waste Outlets, Penetrations and Angles

Waste Outlets: Floor wastes and puddle flanges should be rebated into the floor to allow water to readily drain. Fill all gaps and perimeters with **Duram Resiflex FC**.

Plastic or metal angles: Where required by the Building Code including exterior door barriers and plastic corner angles, or water stops they should be securely embedded in **Duram Resiflex Hybrid Resiflex FC**.

Note: Plastic floor waste, puddle flanges, plumbing and water stop angles can be primed with **Duram Superprime 711**.

Note: Some retrofitted flanges may not require priming, seek Duram technical assistance for guidance.

## APPLICATION

Apply Multithane HV by brush, roller, broom, or squeegee in a minimum of two coats, usually a day apart so that the minimum 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.

**Thinning:** Multithane HV can be diluted with DURAM SOLVENT (only) to meet site demands or product viscosity. The maximum amount of solvent that can be added is 1 Litre per 15 Litre pail. It is recommended that the user contact Duram technical for assistance and guidance on method and ratio of Multithane HV to DURAM SOLVENT.

**Warning:** No alternative types of solvents should be used, using alternative types will lead to product related issues, including no setup & curing, drying, slow cure rate, gassing, gelling, failure of membrane.

### **Water Resistant Applications:**

Apply Multithane HV by brush, roller, broom, or squeegee to a dry film thickness 0.5 mm DFT. The minimum wet coat thickness is 0.6mm.

### **Reinforced System:**

In areas such as corners and over joints and cracks the membrane should be used in conjunction with **Duram Durascrim matting**, a reinforcing polyester fabric. This application consists of applying a base coat in to which the reinforcing fabric is laid followed by the application of a saturating coat ensuring that the Multithane HV is worked well in to the fabric and that no wrinkles or bubbles are present and that fabric is entirely saturated and covered with Multithane HV. Allow to cure. Apply two further coats of Multithane HV.

### **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.

### **Multithane ATC:**

**Multithane ATC** is an aliphatic polyurethane topcoat which extends the life of the exposed membrane by providing UV protection.

When top coating Multithane HV, with **Multithane ATC**, allow Multithane HV to cure and then apply **Multithane ATC** at the approximate rate of 3 to 4 m<sup>2</sup> per Lt.

## COVERAGE

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

### **Duram Multithane HV**

**Unreinforced:** 1.5 Litres per m<sup>2</sup> for two coats combined, i.e. 0.75 Litres per m<sup>2</sup> per coat. Ensure that the DFT of the cured Multithane is at least 1.2mm for horizontal surfaces (minimum thickness per coat is 0.66mm WFT) and at least 1.0mm for vertical surfaces (0.55mm WFT).

**Water Resistant Non-Tanking Walls:** Minimum 0.75L/m<sup>2</sup> at 0.5mm DFT.

The dry film thickness of the membrane on floors and tanking areas must be at least 1.0mm DFT with each coat being at least 500 microns dry film (0.5mmDFT).

## 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, Multithane HV is touch- dry within 4 to 6 hours with full cure within 24 hours. Recoat between 6-24 hours.

## TILING, TOPPING OR TOP COATING

Multithane HV is usually 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.

**Please note for direct tile stick applications please seek advice from Duram.** For exposed applications, Multithane HV must be top coated with **Multithane ATC**.

## 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 **Duram Solvent**. 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 Duram Solvent.

## STORAGE AND PACKAGING

Keep in cool, dry place away from heat, flame, or combustible material. Product contains flammable solvents. Available in 4 Lt and 15 Lt pails. 15 Litre of Multithane HV 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.

## SAFETY AND PRECAUTIONS

Multithane HV 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

**Multithane HV represents the highest standards in Cross Linked Moisture curing Polyurethane waterproofing technology.**

1. Multithane HV meets the Class III High Extensibility classification of AS4654.1 2012 as tested by BRANZ.
2. Multithane HV 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 <sup>0</sup> C to 35 <sup>0</sup> C Substrate Surface Temperature
Elongation	> 360% (Class III Extensibility)
Moisture Vapour Transmission	12.83g/m <sup>2</sup> /24 hours

Complete test summary and results are available from Duram upon request. Revision:1- 2020

## 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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