Product Data Sheet

Multithane UV HV (High Viscosity)

High Viscosity, Liquid, Polyurethane Waterproofing Membrane For Exposed Areas

Description

Multithane UV HV is a single pack, liquid applied, moisture curing, thicker, 'anti-sag' vertical grade, waterproofing membrane which cures to form a seamless, tough, durable, elastomeric (class 3) waterproofing membrane designed for application on to vertical , sloped or rough surfaces.
Multithane UV Vertical incorporates UV stabilisers and UV absorbers to enable the product to provide greater UV protection and stability than conventional aromotic polyurethane membranes.
Multithane UV HV bonds well to most suitably primed building substrates and is suitable for above and below ground applications.
Multithane UV HV is grey. Available in other colours by special order and minimum quantities apply.
Multithane UV HV meets the 'Green Star' enviromental ctriteria.
Multithane UV Vertical is also available in a self -leveling grade (Standard).

Uses

Multithane UV Vertical is designed to waterproof most applications within the building and construction industry including but in particular vertical or rougher type surfaces unsuitable for a self-leveling membrane:

Exposed Areas: Walls, upturns, roofs, decks, terraces, balconies, podiums and gutters.

Tiled or Covered Areas: Shower recess & wet areas (floors and upturns), decks, balconies, terraces, podiums, retaining walls, planters & landscaped areas, structural slabs, tanks, pits, bunding areas and water features.

Suitable Surfaces

Multithane UV Vertical is suitable for most building substrates including: Concrete • Cement • Cement Render • FC and CFC Sheeting • Render • Brick • Block work • Plaster Board • Masonry • Bitumen (when primed with Duram Primeseal) • Metal • Timber, Particle Board and Plywood (when primed with Duram Primeseal).

Surfaces must be made good and should be sound, stable, dry, clean and free of dirt, dust and contaminants and suitably primed.

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

Product contains protective technology including UV absorbers and UV blockers to give the product UV resistance and is therefore suitable for exposed applications. Colour may lighten after periods of exposure or immersion. However, where extended UV resistance is required, Multithane UV Vertical should be top coated with Multithane ATC.

Benefits and Advantages

Multithane UV represents the highest standards in polyurethane waterproofing technology and provides the following benefits and advantages:
• Single pack - no mixing.
• Fast curing within 24 hours).
• Meets the 'Green Star' environmental criteria.
• Suitable for direct sun light exposure.
• Designed for vertical and rougher type surfaces which may be unsuitable for self-leveling membranes.
• Permanently flexible (tests show flexibility > 500% - Class 3 [highest class of extensibility]).
• Will not stain tiles or grout - as Multithane UV is tar and bitumen free.
• Suitable for immersion in water.
• Can be directly tiled (broadcasting of sand in to final coat is recommended).

• Good chemical resistance.
• High strength and puncture resistant.
• Easily repaired and or maintained.
• Odourless (subjective) when cured.
• Formulated to provide long term protection.
• Easy to apply.
• Has good hydrostatic resistance.
• Long history of Australian use.

Precautions in Use

Risk is considered low when properly used but precautions on can, label and / or data sheets should be observed. Use in well ventilated areas. Uncured product is flammable, so keep all sources of ignition away from product and its vapours.

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.

Surfaces should ideally be suitably primed with Duram Primeseal applied at no less than 1 litre per 4m² and allowed to dry. Duram Primeseal must be used for roof and exposed areas, timber and particle board surfaces, bitumen or where there is a risk of evapouration of entrapped moisture in the substrate which may cause the membrane to bubble.
Alternative primers such as Duram Multiseal may be used in non-exposed porous areas and where the moisture content of the surface is very low, applied at 3 to 4 litres per m².
Metal surfaces must be clean and free of contaminants and then metal etch primed. If rusted, treat to remove rust, apply a rust converter and then metal etch prime.
Excessively porous, friable and dusty surfaces may require an additional priming coat.

Allow primers to dry or fully cure before applying the membrane and please refer to the product data sheets of the stated primers.

Detailing Preparation

Corners
Prime as required.
Apply an adequate flexible polyurethane sealant, in accordance the manufacture's instruction and tool off to form a solid, coved or 45º fillet extending at least 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 the following additional steps should 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 (as described above) pressing it firmly on the surface. Apply the Duram membrane directly over the tape and on the adjacent surfaces.

Joins, gaps and Cracks
General
Joins, gaps and cracks 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.
After priming, as required, lay a strip of Duram Leak-Seal Tape over the join or crack pressing it firmly on to the substrate. The Duram membrane is then applied directly to the Duram Leak-Seal Tape and extending at least 75mm on to the adjacent surfaces.
If the Duram Leak-Seal Tape is not used then a suitable bond breaker tape (such as duct tape) at least 48mm wide should be laid over the join or crack and apply a fully reinforced Duram membrane consisting of a base coat of membrane in to which the reinforcing fabric is embedded, a saturating coat of the Duram membrane ensuring that the fabric is entirely saturated and covered and then allowed to cure. At least one or two further coats are applied as per the Duram membrane's Product Data Sheet extending at least 75mm on to the adjacent surfaces.
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 Duram Leak-Seal Tape over the join, pressing it firmly on to the substrate. The Duram membrane is then applied as described under 'Large or Live Cracks'.

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 in to the floor to allow water to readily drain. Gaps and perimters should be sealed with a polyurethane sealant

Plastic or metal angles: Where required by the Building Code such as internal hobs and exterior door barriers and also plastic corner angels under wall boards, they should be securely embedded in to a continuous, gap free bed of a polyurethane sealant / mastic.

Application

Apply Multithane UV Vertical by brush, roller, broom and squeegee in a minimum of two coats, usually a day apart so that the minimum dry film thickness in 1.2mm. The minimum wet coat thickness per coat is 0.5mm.

Reinforced System

In areas such as corners and over joins and cracks the membrane should be used in conjunction with a reinforcing fabric (Duram Durascrim or fibreglass matting). 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 product is worked well in to the fabric and that no wrinkles or bubbles are present and that fabric is entirely saturated and covered with product. Allow to cure. Apply one or two further coats of products.

Multitane ATC

Multithane ATC is an aliphatic based polyurethane top coat which extends the life of the exposed membrane.
When top coating Multithane UV with Multithane ATC, allow Multithane UV to fully cure and then apply one good coat of Multithane ATC at the approximate rate of 3m² to 4 m² per litre.

Coverage

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

Multithane UV Vertical: Generally, 1.5 to 1.6 litres per sq.m. for two coats combined, i.e. 0.75 to 0.80 litres per sq.m. per coat. Average 15 pail usage approximates 10m².

Primers: Generally 4 sq.m. per litre per coat (refer above).

Colours

Generally Grey. Colour may lighten after application. Other colours may be available but minimum quantities apply.

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 UV Vertical is weather resistant within 8 to 12 hours with full cure within 24 hours.

Storage

Keep in cool, dry place away from heat, flame or combustible material. Product contains flammable solvents. Class 3 dangerous goods must be declared prior to transportation. Available in 5 Lt and 15 Lt pails.

Self life: 6 - 12 months in unopened container but best used within 6 months. As this is a polyurethane some skinning of the product may occur. This should be cut out and removed. Balance of the product will be suitable for use.

Clean Up

Avoid spills. They are difficult to clean particularly off porous surfaces. 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.

Tiling, Topping or Top Coating

Multithane UV Vertical can be exposed, covered, topped with sand: cement mix, covered with geo-textile and pebbles or tiled which will extend its life. If membrane is to be tiled, dry builders sand should be liberally and fully broadcast into the last wet coat to provide a mechanical key. Allow to cure then remove any loose sand. Ensure surface is dry and clean. Two pack, flexible tile adhesives are recommended. Acrylic bonding agents can be used in sand:cement mixes for better strength and adhesion. When tiling, it is essential that adequate expansion joints are installed in accordance with good tiling practice and AS3958.1-1991.

Safety & Precautions

Multithane UV Vertical is solvent based. 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. Product is flammable when wet. Keep away from all sources of ignition. Ensure adequate ventilation. Vapours may collect in low lying areas.
For full safety data refer to the products Material Safety Data Sheet. Observe precautions as per label.

Tests and Technical Data

Information below is general and approximate. Multithane UV Vertical passes the criteria for AS4858:2004 Wet Area Membranes Elongation at break: >500% Class 111 High Extensibility. Resistance to Cyclic Movement: 50 cycles without rupture, tears and crazing.

Issued: 1 May 2012 | Valid to: 31 May 2015

Conditions of Use and Disclaimer

The information contained in this Material Data Sheet 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 Product Data Sheet 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.

Material Safety Data Sheet

No: Multithane UV HV
Issue Date: 31 May 2010
Issued By: Duram
Valid To: 31 May 2015

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Hazardous According to the Criteria of OHSC Australia

1. Identification of Material And Supplier

Product Name	Multithane UV HV (High Viscosity)
Product Code	Duram Multithane UV HV, or Multithane UV HV
Company Name	Duram Industries Pty Ltd 51 Prince William Drive Seven Hills NSW 2147
Address	51 Prince William Drive, Seven Hills NSW 2147
Emergency Tel	Australian Poisons Information Centre: 131 126
Telephone	02 9624-4077
Fax	02 9624-4079
Emergency Contact	Australian Poisons Information Centre: 131 126
Address	Duram Industries Pty Ltd 51 Prince William Drive Seven Hills NSW 2147
24 hrs Contact	
Other Information	This MSDS summarises to the best of our knowledge the health and safety hazard information of the product and how to safely handle and use the product in the work place.

2. Hazards Identification

Hazardous Classification	Hazardous Substance, Dangerous goods Australia: This material is hazardous according to health criteria of ASCC. Hazardous Catagory Xn Harmful Xi Irritant Class: 6.1 Toxic Poison Schedule: S5 (Australia). Classified as a Dangerous Good for tansport by Road and Rail.
Risk Phrase(s)	Harmful by inhalation.Irritating to eyes. respiratory system and skin. Possible risk of irriversible effects. May cause senitisation by inhalation and skin contact.

3. Composition/Information of Ingredients

Chemical Characterisation

Ingredients

Name	CAS	Proportion	Risk
Urethane Prepolymer	9048-51-1	30 to 60%	
Inert Fillers & Thickeners	Not Known	10% to 30%	
Xylene	1330-20-7	< 30%	
UV Stabilisers, UV Absorbers	Not Known	< 5%	

4. First Aid Measures

Inhalation	Remove patient from exposure. Remove contaminated clothing. Keep patient warm and comfortable. Keep at rest until fully recovered. Ensure airways are clear. If breathing is laboured or cyanotic (blue), have a qualified person give oxygen through face mask. If breathing stopped give immediate artificail respiration and apply external cardiac massage. Seek immediate medical advice.
Ingestion	Rinse mouth with water. Give water to drink. Do NOT induce vomiting. Seel immediate medical attention.
Skin	Promptly wash with soap and water. Remove contaminated clothing and wash before re-use. If swelling, redness, blistering or skin irritation occures/ persists then seek medical advice.
Eye	Immediately irrigate with copious quantity of clean water for at least 15 minutes. Hold eyelid open to flush product from under lid. Seek immediate medical assistance.
Advice to Doctor	Treat symptomatically. Effects may be delayed. If patient has been subject to severe exposure then the patient should be kept under medical supervision for at least 48 hours.

5. Fire Fighting Measures

Fire Fighting Measures	Product is flammable. Product contains flammable solvents.Containers may rupture / explode if subjected to high intensity heat. Keep containers cool with water spray to prevent expansion and possible rupture. If safe to do so, remove containers away from heat source or fire. Burning may product a dense and irritation smoke or fumes. Fire fighters should wear self-contained breathing apparatus if there risk of exposure to burning product.
Special Protective Equipment for Fire Fighters	Self contained breathing apparatus should be used. Full protective gear should be worn.
Specific Hazards	Combustible / flammable liquid. Combustion products may include carbon oxides (CO, CO2) nitogen oxides (NO, NO2), isocyanate vapours, hydrocarbon vapours and HCN with emissions of toxic vapour, fumes and smoke. Due to reaction with water producing CO2, a hazardous build up of pressure could result leading to possible rupture if containers are re-sealed
Unsuitable Extinguishing Media	Foam, dry agent (carbon dioxide, dry chemical powder). Water fog or if unavailable fine water spray may be used if no other medium is available, and then copius quantities. Reaction between water and hot isocynate may be vigorous.

6. Accidental Release Measures

Spills & Disposal	Major Spill: • Clear area of personell. • Cleaners should wear protective gear including fask mask or goggles, saftey boots, gloves and overalls. • Note: Product is viscous and should therefore spill should be able to be confirned. • Prevent product from entering drains and waterways. Product will cure in water to a rubber0like consistency. • Cover and contain with soil, sand or absorbent material. • Shovel in to open drums. Allow product to cure before closing. • Dipsoe of cured product in to land-fill. Minor Spill • Follow above procedure.
Personal Precautions	This information assumes a large spill: Clear area. Wear full protective gear to prevent skin and eye conatct and inhalation of vapours. Prevent run off from enetering water ways and drains. Cover with wet soil or wet sand. Let material react for 10 minutes.

	Shovel in to open containers. Was area with water. Allow residue to react. Provide good ventilation.
Environmental Precautions	Solvents will evaporate out of the product. The product will naturally cure on contact with air and will cure quicker on contact with water to a solid rubber-like consistency and become mostly inert.

7. Handling and Storage

Precations for Safe Handling	Avoid contact with skin and eye and inhalation of vapours.
Conditions for Safe Storage	Store in cool, dry area away from water, alcohols, amines, acids, alkalis, corrosive chemicals, heat sources and foodstuffs. Keep dry. Products reacts with water and can lead to container rupture. Recommedned storage temperature range 15 to 35C. Do not in contact with aluminium or galvanised steel. Check regularly for leaks. Unsuitable containers are: aluminium, copper, copper alloy and galvanised metals. Classified: Dangerous Good Class - 6.1. Poison Schedule: S5.
Storage Temperature	15ºC to 35ºC

8. Exposure Controls/Personal Protection

Exposure Controls, Personal Protection	
National Exposure Standards	No specific value has been assigned by the National Occupational Health and Safety for this product.
Engineering Controls	Ensure ventilation is adeqaute to keep air concentrations below Exposure Standards. Vapours are heavier than air and may collect in low lying areas. Do not enter confined areas where vapours may have collected. Keep containers closed when not in use. Keep away all sources of ignition.
Respitory Protection	Product is generally rolled and hence product is not atomised. Therefore, use in well ventilated areas should suffice. However, face shield or air mask with positive air flow should be used in areas where ventilation is inadequate.
Eye Protection	Face shield or goggles.
Hand Protection	Neoprene, Nitrile & PVC gloves (long).
Footwear	Boots or safety foot wear.
Body Protection	Coveralls.
Hygiene Measures	Observe common sense and good industrial practices.

9. Physical and Chemical Properties

Form	Thick liquid, normally grey in colour.
Appearance	Thick liquid, normally grey in colour.
Odour	Solvent odour.
Melting Point	Not Available.
Boiling Point	Approximately 300ºC.
Specific Gravity	Approx. 1.2
pH Value	Not Available
Vapour Pressure	Not Available. Relative air density(air = 1) > 1.
Flash Point	Approximately 28ºC (as for Xylene)
Flammable Limits	Not Available
Kinematic Viscosity	Not Available.
Other Information	Insoluable in water. Soluble in most organic compounds.

10. Stability and Reactivity

Stabililty and Reactivity	Stable at room temperature.
Hazards	Avoid high temperatures.
Decomposition Products	Carbon oxides, nitrogen oxides, isocyante vapours and hydrogen cyanide.
Hazardous Reactions	Will recat exothermically with water and all organic compounds containing active hydrogen groups. Reactions with water and hot isocyante may be vigorous.

11. Toxicological Information

Toxological Information	No adverse effects expected if handled in accordance with this Safety Data Sheet. Acute Toxicity No LD50 data avilable. Industrial experience in humans has not shown any links between MDI exposure and cancer development.
Inhalation	Accute Inhalation: A respiratory irritant and possible respiratory sensitiser. Repeated or prolonged inhalation of vapour at levels above the occupational exposure standard colud cause respiratory sensitisation. Symptoms may include - irritaion of eyes, nose, throat and lungs, possibly with dryness of throuat, tightness of chest and difficulty breathing. Onset of respiratory symptoms may be delayed for several hours after exposure. A hyper-recative response may develop to even minimal concentrations of MDI in sensitive persons. Inhalation of high concentrations will lead to anaesthetic effects and adverse effects on the central nervous system. Symptoms may include ligh-headedness, nausea, vomiting and headache. Inhalations of very high concentrations, which is unlikely as the product is usually rolled (and not atomised) can result in loss of consciousness and irregular heartbeat and prove sudenly fatal.
Ingestion	Accute Ingestion: This is highly unlikely as the product is a thick viscous liquid and would be difficlut to swallow. May produce nausea, vomiting, diarrhoea an can lead to drowsiness and possible lack of consciousness.
Skin	Moderate irritation. A skin sensitiser. Prolonged contact can lead to allergic dermitisis. Animal tests have shown that respiratoty sensitisation can be induced by skin contact with known sensiters including diisocyantes. Hence the need for protective clothing and gloves.
Eye	Both liquid and vapour are irritants.

12. Ecological Information

Environmental	Avoid contaminating water ways. For MDI, a pond study showed gross contaimination caused no significant toxic effects on a wide range of flora.
Protection	
Other	

13. Disposal Considerations

Disposal Consideration	Refer to State Land WasteAuthority. Empty containers must be de-contaminated.
Container Disposal	Allow residue product to cure, thne dispose to land-fill.

14. Transport Information

Transportation Information	Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by road & rail, IMDG for marine and IATA for air. UN No.: 2810 Class: 6.1 Toxic Packing Group: 111 Hazchem: 2X
Storage and Transport	Keep apart from explosives (Class 1), heat, sources of ignition, water, food and food packaging. Store in cool dry areas.

15. Regulatory Information

Poisons Schedule	Australia: Poisons Schedule S5.
AICS (Australia)	

16. Other Information

Other Information

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