

Product Data Sheet

Azcothane

Polyurethane Fortified, Water-based Waterproofing Membrane

Description

Duram Azcothane is a water-based, highly flexible, high performance, polyurethane fortified acrylic emulsion waterproofing membrane formulated for use in demanding exposed, under tile, underground and immersed waterproofing applications.

Duram Azcothane's formulation complies with AS4858:2004 and is generally applied in accordance with AS3740:2004 and meets the 'Green Star' environmental criteria.

It is liquid applied and cures to form a durable, flexible, strong, UV resistant, odourless, seamless, and impervious waterproofing membrane. It does not re-emulsify after it has fully cured making it ideal for long-term waterproofing. It will not stain grout or tiles.

Uses

Duram Azcothane has been specifically designed for exposed, under-tile, underground and immersed waterproofing requirements including the long-term waterproofing of:

- Exposed concrete and metal roofs
- Wet areas within buildings (shower recesses, bathrooms & laundries)
- Ponds & water features
- Concrete and timber decks
- Terraces and balconies (under tiles)
- Concrete slabs
- Retaining walls
- Planter boxes
- Water retaining structures
- Tiles or topped areas

Suitable Surfaces

Duram Azcothane is suitable for properly primed: Concrete, cement, cement render, block work, brick, masonry, FC sheeting and CFC sheeting, plaster board and timber, plywood and particle board (if primed with Duram Primeseal) and metal (if primed with a metal primer).

Note: We do not regard particle board as a suitable substrate for wet areas and if possible should be replaced or covered with CFC sheeting - particularly in shower recesses. If covered we recommend that the particle board be coated with 2 coats of Duram Primeseal and joints and corners sealed with a polyurethane sealant prior to laying the CFC sheeting.

Duram Azcothane may be applied to slightly damp surfaces but the product will not fully cure if the surface remains damp. This process takes longer than if the surface was allowed to dry before application. The surface must dry before the membrane can dry. Freedom from surface water, continual dampness is essential.

Additional Uses

Duram Azcothane has been formulated as a completely versatile waterproofing membrane, available in a range of colours, making it suitable for:

- Exposed to direct sunlight on roofs (flat, sloping or metal deck).
- Under tile applications - wet areas, balconies, terraces etc.
- Underground applications - retaining walls, planter boxes and garden areas.
- Immersed applications - ponds and water features.

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

Duram Azcothane is not designed as a trafficable membrane although infrequent maintenance foot-traffic would be acceptable.

Benefits and Advantages

Duram Azcothane is a versatile membrane suitable for many demanding waterproofing applications:

- Polyurethane fortified
- It meets the criteria of AS4858:2004 and is applied in accordance with AS3740:2004.
- Meets the 'Green Star' environmental criteria.
- Very low VOC levels.
- UV resistant - suitable for direct exposed to sunlight.
- Not a hazardous product and not flammable. Water based.
- Permanently flexible (tested to class 111 - highest tensibility) & strong.
- Formulated for wet area and under tile applications.
- Does not re-emulsify after proper curing.
- Tough, durable and flexible.
- Dries fast.
- Compatible with most tile adhesives.
- Easy to apply.
- Virtually odourless.
- Will not stain grout or tiles.
- Available in range of colours.

Precautions in Use

The product is considered safe to use if used correctly, as intended and proper industrial hygiene and practices are used. Always observe safety precautions.

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.

Priming

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 roofs and exposed areas, timber and particle board surfaces, bitumen or where there is a risk of entrapped moisture in the substrate which may cause the membrane to bubble.

Priming is adequate if the surface has a solid off-white appearance. Particle board and bitumen surfaces should be primed with 2 coats of Duram Primeseal.

Alternative primers such as Duram WB Primer, may be used in non-exposed areas and where the moisture content of the surface is very low applied and applied at no less than 1 litre per 4m². Allow WB Primer to fully dry before top coating.

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

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 45° fillet extending at least 10mm on to the adjacent surfaces. Allow sealant to cure. Apply the Duram membrane directly over the cured 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 (stick-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 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 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 perimeters 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

Stir well. Apply by brush, roller, soft broom or squeegee.

Apply in a minimum of two coats. To perform correctly the dry film thickness of the membrane must be at least 1.0mm to 1.2 mm, with each coat at least 500 microns (0.5mm).

The second coat should applied as soon as the first coat is dry and within 7 days, beyond which the first coat should be re-cleaned.

Azcothane is suitable for use with a reinforcing fabric (Durascrim) and Leak Seal Tape.

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 so that the dry film thickness is at least 2.00mm.

Coverage

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

Duram Azcothane

Unreinforced: Minimum 1.5 litres to 1.8 litres per m² ., i.e 0.75 litres to 0.9 litres per m² per coat. A 15 litre pail will cover 10 m² for 2 coats at 1.0mm dry film thickness.

Reinforced: Minimum: 2.0 litres per m².

The dry film thickness of the unreinforced membrane must be at least 1.00mm and preferably 1.2mm, with each coat being at least 500 microns (0.5mm).

Primers

Minimum 1 litre per 4m².

Colours

Duram Azcothane is available in white, light grey, light blue, midnight blue, sandstone and black. Special colours available upon request but minimum orders will 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.

Duram Azcothane is a fast drying water based product. Expected curing at 25°C at 50% RH: Touch dry: 4 to 6 hours per coat; Set: 12 hours; Full cure: 24 hours per coat. Ensure membrane is fully cured before tiling or topping.

Storage

Store in cool, dry area. Product is not flammable. Do not allow to freeze. Shelf life - about 12 months. Available in 1, 4, and 15 Lt pails.

Clean Up

Wet spills can be cleaned with water, but spills should be avoided as it is difficult to remove entirely from porous surfaces.

Tiling, Topping or Top Coating

Duram Azcothane is compatible with most tile adhesives and 3:1 sand:cement beds. Ideally the beds should be sealed / waterproofed to prevent the bed absorbing and holding water. Selection of the tile adhesive should be compatible with the flexibility of the substrate. Tiling must be done in accordance with AS3958.1-1991 and adequate expansion joints installed.

Safety & Precautions

Duram Azcothane is user friendly and safe to use if used correctly as intended. Nevertheless, protect eyes and skin and observe the safety precautions on the can and data sheet.

For full safety data refer to the products Material Safety Data Sheet. Observe precautions as per label.

Tests and Technical Data

Duram Azcothane's formulation complies with AS4858:2004 Wet Area Membranes as tested by the CSIRO.

Application temperature range	10 to 35°C
Tensile Bond	2N/mm after 14 days
Moisture Vapour Transmission	0.26 g/sq.m./24 hours
Elongation	> 300% (Class 111 Extensibility)

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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

Azcothane

Polyurethane Fortified, Water-based Waterproofing Membrane

Not classified as a hazardous product according to the criteria of Worksafe Australia

Identification

Product Name: Azcothane
Other Names: Duram Azcothane
U.N. Number: N/A
Class: N/A
Hazchem: N/A
Code:
Poison: N/A
Schedule:
Pack Sizes: 1, 4, 15 Litre Pails

Physical Description

Appearance: Creamy liquid, water based liquid in a variety of colours.
Boiling Point: 100% (Water) - Approx.
Vapour: Not Known.
Pressure: N/A
Percent Volatiles:
Specific Gravity: 1.05 - 1.1
Flash Point: N/A
Flammability: N/A
Water Solubility: Soluble/ Miscible (will re-emulsify when uncured)

Ingredients

Chemical	CAS No.	Proportion
Acrylic Copolymer Emulsion	N/A	< 40%
Aliphatic urethane in Aqueous solution	N/A	< 10%
Fillers - Calcium carbonate	N/A	< 30%
Minor ingredients	N/A	< 3%
Water	7732-18-5	< 10%

Uses:

Duram Azcothane has been specifically formulated for most waterproofing requirements, including long term waterproofing of wet areas within buildings, under tile applications, exposed applications (roofs), underground applications (retaining walls and planters) and immersed applications (ponds).

Health Warning Information

Health Effects

Swallowed: Material is regarded as low oral toxicity. Considered an unlikely route of entry in commercial and industrial environments. The liquid is discomforting to the gastro- intestinal tract if swallowed. Ingestion may result in nausea, abdominal irritation, pain and vomiting.

Eye: The liquid is discomforting to the eye's and is capable of causing a mild, temporary redness of the conjunctiva (similar to windburn). Temporary impairment of vision and or other transient eye damage / ulceration. The vapour is mildly discomforting to the eye's.

Skin: Mildly irritating. May affect skin with prolonged contact such as dermatitis. Avoid exposure to skin that is cut, damaged or irritated.

Inhaled: Not normally a hazard due to non-volatile nature of product. Overexposure is unlikely in this form. Inhalation of vapour is more likely at higher than normal temperatures.

CHRONIC HEALTH EFFECTS: Principal routes of exposure are usually by skin contact with the material and inhalation of vapour. Prolonged or repeated skin contact may cause drying with cracking. Irritation and possible dermatitis following. Avoid contact with unprotected skin, inhalation of vapour or ingestion. Observe good occupational work practices.

First Aid

Swallowed: Do not induce vomiting. Rinse out mouth. Give plenty of water to drink. Seek medical assistance or contact the Poisons information Service (Australia 13 1126 and New Zealand 03 4747000).

Eye: Flush thoroughly with clean water, holding eye lid open to flush product from under the lid. Removal of contact lens after injury should be done by a skilled or medical person.

Skin: Remove contaminated clothing, and wash with soap and water. Seek medical attention in event of irritation.

Inhaled: If fumes or combustion products are inhaled: Remove to fresh air. Lay patient down keep warm and rested. Other measures are usually unnecessary.

Advice to Doctor

Treat symptomatically.

Precautions in Use

HAZARDS IDENTIFICATION

Not classified as hazardous.
Non-hazardous substance.
Non-Dangertous goods.

ENGINEERING CONTROLS

Use in well ventilated areas. General exhaust is adequate under normal operating conditions.

Exposure Limits

Refer above.

Use in well ventilated areas. Under normal use (roller or brush applied) general exhaust is adequate.

Ventilation

Product should be applied in areas with adequate ventilation. Under normal use (roller or brush applied) general exhaust is adequate.

Personal Protection

Gloves: Rubber or PVC.

Eyes: Safety goggles. The wearing of contact lenses poses an additional risk. Soft lenses may absorb irritants and all lenses concentrates them.

Feet: Wear safety footwear.

Body: Avoid repeated and long term skin contact.

Safe Handling Information

Storage and Transport

Store in cool, dry area and place out of the reach of children. Product is not flammable. Avoid freezing.

Store in original containers. Observe manufacturers storing and handling recommendations.

Check containers are labeled and leak-free.

Storage incompatibility: None known.

Transportation Restrictions: None.

Spills and Disposal

Clean up spills immediately. Product is water based. Prevent spills from entering the drains or sewers. Absorb product with sand or earth or absorbent material and dispose to land fill in accordance with local council regulations.

Not considered to be harmful to aquatic life in minor quantities.

Major spills unlikely due to individual size of containers and thick consistency of the product.

Fire / Explosion Hazard

Product is not readily combustible under normal conditions. However, it will breakdown under fire conditions and the organic component may burn.

Heat may cause expansion or decomposition with violent rupture of the containers. Decomposes on heating and may produce toxic fumes of carbon monoxide (CO)

May emit acrid smoke. Combustion products include ammonia.

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