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INNOVATIVE BUILDING PRODUCTS

Westbuild PRO™ Specification

Waterproofing – Full Instructions Preparation and Application

Scope

Waterproofing solutions designed and engineered in Australia for both Commercial and Domestic applications. Westbuild PRO™ provides you with a harmonious system designed to be used in conjunction with the Westbuild range of levelling mortars, screeds and tiling adhesives.

Products

Westbuild PRO™ Wet Area Waterproofing	Westbuild PRO™ PolyWEB Reinforcing Bandage
Westbuild PRO™ Wet Area Waterproofing is highly flexible to accommodate structural movement. It is a Polyurethane (PU) modified single component membrane designed for use under tile and in wet area applications. Westbuild PRO™ Wet Area Waterproofing is the ideal waterproofing membrane for use prior to tiling with Westbuild tile adhesives and guarantees a complete system. Compliant with standards: AS4858:2004, AS3740:2010, AS4654, Low VOC Green Star IEQ V2 2013, Green Star Office V2/V3, APAS 181, AS4020:2005	Westbuild PRO™ PolyWEB Reinforcing Bandage is a strong, flexible fabric designed to reinforce Westbuild PRO™ Wet Area Waterproofing to form a strong, integrated membrane sheet. PolyWEB Reinforcing Bandage is a non-woven, rot-proof polyester fabric essential in the application of liquid applied waterproof membrane systems to form a strong, integrated membrane sheet. It will enhance the tensile strength, tear resistance, crack bridging and puncture resistance of membranes.

Mechanical and Physical Properties - Westbuild PRO™ Wet Area Waterproofing

Properties	Measurement/Standard	Test Results
Adhesion	AS1580.408.5	Concrete – 1.5N/mm^2 Fibre Board – 2.0N/mm^2 Plywood – 1.8N/mm^2 Lightweight Block – 0.5N/mm^2 Brick – 2.5N/mm^2 Steel – 1.6-3.0N/mm^2
Water Vapour Transmission	ASTM E96	1g/m^2/24 hours
Hardness	ASTM D2240	29A
Elongation	AS4858	317%
Flexibility	AS1580.402.1	2mm
VOC	SCAQMD 304-91	13 g/L
Tensile Strength	AS4858 A1(a)	1.6-1.9 MPa
Chemical Resistance	7 Day Immersion	Dilute Acids – Good Dilute Alkali – Good Salt Solutions – Good
Water Absorption	AS 3558.1	2.73%

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Preparation

1. Substrate design must be in accordance with relevant Australian standards and currently National building requirements.
2. All surfaces must be installed to manufacturer's requirements, suitable for use and include sufficient falls to waste.
3. All surfaces must be thoroughly clean:
    i. All contaminants including dirt, dust, grease, oil, curing compounds, cement laitance, airborne pollutants, mildew, mould etc. must be removed using a compatible chemical cleaning product and / or mechanical process.
    ii. If surfaces are not clean, waterproofing membrane adhesion will be compromised. Poor surface adhesion may lead to delamination, flaking or peeling of the membrane.
4. If surface has been mechanically ground:
    i. All dust and laitance must be removed by vacuum and pressure wash / wet vac.
    ii. If dust is not removed, this may become incorporated into membrane during application, affect adhesion and may lead to delamination.
5. If acid etching has taken place:
    i. The acid must be neutralised before membrane is applied. If neutralisation does not take place, acid will continue to attack and weaken the substrate surface. This will compromise the adhesive strength of the membrane.
    ii. Acid neutralisation may be achieved by treating the area with a 500g bicarbonate of soda: 9L water solution, followed by a pressure wash.
6. All surfaces must be sound:
    i. The surface should have a light even texture.
    ii. Masonry should be flush pointed and all defects in existing surfaces made good.
    iii. Ensure all high points and protrusions are ground off. Blow-holes, areas of honeycombing, etc. to be filled and the surface brought back to an even profile with a suitable repair mortar modified with Westbuild Flexible Additive Fortifier & Primer and troweled to a smooth even finish and allowed to cure.
7. All surfaces must be dry
    i. A moisture test is required 100% of the time to ascertain if the substrate is dry enough to waterproof. Electronic moisture meters are recommended.
    ii. If membrane is applied to substrates that are not dry, blistering or bubbling of the coating may occur. Waterproof membranes must be protected from all forms of moisture during the curing phase.
8. Surfaces Subject to Rising Damp (moisture from below)
    i. On surfaces subject to moisture coming from below (rising damp) or damp surfaces (no standing water) which won't dry out, apply a priming treatment of 2 coats of a suitable epoxy based sealer, such as Crommelin Dampstop.
    ii. Damp surfaces or negative hydrostatic pressure will compromise membrane adhesion.
9. Puddle Flanges, drainage and coving
    i. Install appropriate puddle flanges or similar correctly, appropriate coving and or sealant fillet to all wall to wall and wall to floor joints and around all details and intrusions, as applicable to the chosen class of membrane.
    ii. These areas are often the source of leaks, so time should be taken to ensure all detail work is completed to a high standard.
10. Ensure applicable surface priming is conducted to maximise the quality of the surface to be waterproofed. Non-primed surfaces may lead to poor membrane adhesion or negatively affect cure rates.
11. For further advice, contact WESTBUILD on 08 9309 2029

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Westbuild Tips – How to Waterproof Successfully

1. Only waterproof when the substrate is completely dry. If excessive moisture is in the substrate when membrane is applied, or during the curing phase, this may affect final adhesion and bubbles or blisters may form.
2. Only waterproof when environmental conditions are suitable and adequate air flow is available to assist curing.
3. It is recommended that membrane is applied late morning to early afternoon – after substrate moisture has been released and dew point has been exceeded.
4. Do not waterproof if surface/ambient temperature is too high or too low; membrane carrier solvents will evaporate too quickly and not allow resins/polymers to coalesce at the correct rate.
5. Do not waterproof if rain is expected during cure time, or if humidity is too high, or likely to be high during the initial cure phase. This may affect final adhesion to substrate, cause re-emulsification of the membrane and negatively affect waterproofing characteristics.
6. Weather details may be checked at: http://www.bom.gov.au/

Application of Waterproof Membrane

1. Ensure substrate is completely dry before membrane application.
2. Due to the wide variety of substrates available, a trial patch is always recommended to ensure adhesion characteristics are as required. If this is not conducted and final finish is not as desired, removal of membrane may be a difficult and expensive process.
3. Westbuild PRO™ Wet Area Waterproofing membrane should only be applied as per recommended coverage rates and film builds. Not enough membrane will compromise performance, allowing leaks and blisters to occur. Too much membrane per coat may result in non-curing or cracking of the membrane.
4. Do not thin Westbuild PRO™ Wet Area Waterproofing membrane with anything unless it is to be used as a prime coat and stipulated by Westbuild.
5. Always ensure sufficient airflow is provided for optimum curing conditions.
6. Westbuild PRO™ Wet Area Waterproofing membrane must be protected from moisture during the cure phase.
7. Ensure the membrane is inspected for damage prior to over coating.
8. If pond testing is required, ensure this is conducted as per the manufacturer's specifications and all ponding water is removed and the surface dried after the completion of the test.
9. If the membrane is to be back filled against, ensure that protection board or similar is installed.
10. Ensure the membrane is inspected upon completion of after trades, to ensure any penetrations are waterproofed or any damage is repaired.
11. Exposed membranes should be inspected on a regular basis, cleaned and contaminants removed and any areas of damage recoated. A maintenance schedule is vital to ensure membrane longevity and manufacturer's warranty.

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Troubleshooting – Identifying Moisture Problems

Problem	Possible Cause
Membrane Bubbles/blisters	If excessive substrate moisture is present, it will try to leave the surface as increasing atmospheric temperatures open substrate pores and draws moisture up. Moisture will be trapped under the coating and expand causing blisters.
Waterproofing Delamination	Contaminants or laitance on the surface will retard waterproofing membrane's ability to bond to the surface. As the membrane cures, delamination may occur. This may be identified by a dusty type feel and appearance on the underside of the membrane with blistering / flaking / peeling.

Troubleshooting – Common Waterproofing Problems and Solutions

Problem	Solution
Bubbles/blisters	Usually occurs when moisture is present in substrate during membrane application, or when exposed to moisture before full cure has been achieved. Allow surface to dry, the majority of blisters may disappear. If not, cut out and remove blisters. Allow surface to completely dry and re-apply membrane as per recommended coverage rates.
Delamination in between coats	Usually caused by application of membrane over a non-compatible existing coating, or contamination between coats by dust, moisture etc. Remove membrane totally, remove surface contaminates and re-apply membrane as per recommended coverage rates.
Delamination from substrate	Usually caused by poor surface preparation, or when moisture is present in substrate during membrane application. May also be caused if the substrate is in a poor condition / friable. A densifier may be required before re-application. Remove membrane totally, repair and clean substrate then re-apply.
Cracking	May be caused by under or over application. If cracking is significant, remove these areas and re-apply membrane as per recommended coverage rates. If cracking is minor, allow area to dry and re-apply membrane to cracks as per recommended coverage rates.
Disintegration of exposed membrane	Incorrect, non-UV stable membrane applied. Remove membrane totally, repair and clean substrate, then re-apply.
Poor tile adhesive bond	Incorrect membrane applied or adhesive is not compatible. (particularly the case with ready to use liquid adhesives) Remove membrane totally, repair and clean substrate, then re-apply.

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The above information is a general specification only and does not make provision for specific site and project requirements. Please consult with the Technical Data Sheet or directly with Westbuild for a unique and tailored specification for your project.