Dukkaboard AQUA 77

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Tec-Seal Pro Waterproofing Membrane

A thin and highly flexible liquid waterproofing membrane for use on interior & exterior walls & floors prior to the installation of ceramic & porcelain tiles.

Can be effectively sprayed to increase productivity on large projects.



PRODUCT DESCRIPTION

Dukkaboard Aqua77 Tec-Seal Pro is a thin highly flexible, liquid waterproofing membrane for use on interior & exterior walls & floors prior to the installation of ceramic & porcelain tiles.

It is a single component self curing liquid rubber polymer equipped with Microban® antimicrobial technology that forms a flexible, seamless waterproofing membrane, that bonds directly to a wide variety of substrates.

Dukkaboard Aqua77 Tec-Seal Pro can be effectively sprayed to increase productivity on large projects.

PRODUCT FEATURES

- Non-shrinking
- Crack free setting
- Watertight against positive and negative pressurized water
- Excellent bonding to mineral surfaces
- Resistant to frost and ageing
- Effective CO2 barrier
- Single component - ready to use
- Apply using a sprayer, brush or roller
- Thin build-up
- Excellent crack bridging - Non structural movement joints up to 3mm don't require taping
- Bonds directly to metal and PVC plumbing fixtures
- Rapid drying - In 60 minutes surface is touch dry, and within 3 hours ready for over-tiling dependent on site conditions
- Changes in colour from a light sage to an olive green when cured — allows for ease of inspection
- Solvent Free
- Non-flammable
- Equipped with Microban® antimicrobial technology

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PRODUCT SPECIFICATION

Product Description	Dukkaboard Tec-Seal Pro	
Product Classification EN 14891	DM OP	
Basis	Self-curing liquid rubber polymer	
Colour	Light Green	
Apparent Density	1.35 g/cm³	
Flammability	No	
	Value	Requirements
Initial Adhesion	1.0 N/mm²	≥ 0.5 N/mm²
Adhesion after Immersion in Water	0.8 N/mm²	≥ 0.5 N/mm²
Adhesion after Heat Action	1.3 N/mm²	≥ 0.5 N/mm²
Adhesion after Freeze-Thaw Cycles	0.9 N/mm²	≥ 0.5 N/mm²
Adhesion after Immersion in Calcium-Saturated Water	1.2 N/mm²	≥ 0.5 N/mm²
Adhesion after Immersion in Coloured Water	0.8 N/mm²	≥ 0.5 N/mm²
Waterproofing at 1.5 bar for 7 days (Standard Pressure)	No penetration	No penetration
Crack-bridging Ability (In Standard Conditions)	5.0 mm	≥ 0.75 mm
Consistency	Smooth, thick liquid	
Wet Density	1.35 g/cm³	
Mix Ratio	Ready to use	
Application Temperature	+10°C to +30°C	
Time to Tile Install	60 mins (after final coat)*	
Time to Flood Test	2 hours (after final coat)*	
Minimum Thickness	0.8 mm	

PRODUCT FORMATS AVAILABLE

STOCK CODE	SIZE (KG)	COVERAGE KG/M2	CONTAINER TYPE	EAN 13 CODE
8275	25	23.75	Bucket	N/A
8274	1000	950	IBC	N/A

PRODUCT CERTIFICATES & STANDARDS

- Conforms to EN 14891 DM OP
- Exceeds ANSI A118.10 and A118.12
- IAPMO approved
- Extra Heavy Service rating per TCNA performance levels (RE: ASTM C627 Robinson Floor Test)
- GEV EMICODE: EC1 Plus
- ÉMISSIONS DANS L'AIR INTÉRIEUR: A+
- UL Greenguard: This product has been certified for Low Chemical Emissions (ULCOM/GG UL2818) under the UL GREENGUARD certification program for Chemical Emissions for Building Materials, Finishes and Furnishings (UL 2818 Standard) by UL Environment.

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SPRAY APPLICATION

An airless spraying technique can be used as a means of application. This document will refer to the use of Graco's Mark IV Electric Airless Sprayer. These sprayers are designed for spraying the contents from a 15 litre bucket. A good understanding of the equipment setup, delivery and clean-up procedures are required in order to effectively spray Dukkaboard Aqua77 Tec-Seal Pro.

APPLICATION AREAS	SUITABLE SUBSTRATES
Industrial, commercial and residential bathrooms	Cement Backer Board
Wetrooms and shower rooms	Cement Mortar Bed, Plaster & Terrazzo
Swimming pools, fountains and water features	Concrete
Spas and hot tubs	Concrete & Brick Masonry
Steam rooms (when used with a vapour barrier)	Self-Levelling Compounds
Terraces and balconies (over unoccupied spaces)	Marine Grade Plywood (Interior Use Only)
Countertops and façades	Gypsum Wallboards
Kitchens and food processing areas	Ceramic & Porcelain Tiles and Stone

SUBSTRATE	APPROXIMATE DRYING TIMES*
Concrete	50 mins
Cement Board	30 mins
Fibre Cement Board	15 mins
*at 21°C and 50% RH	

CONSUMPTION

0.95 kg/m2 (with two coats)

SHELF LIFE

Factory sealed containers of this product are guaranteed to be of prime quality for two years if stored at temperatures between 0°C and 43°C.

SUBSTRATE PREPARATION

Surface temperature must be between 10 and 30°C during application and for 24 hours after installation.

All substrates must be clean, dry and strong enough to support the weight of the tiles, tile adhesive and grout. Remove all dust, dirt, oil, grease and other contaminants that may affect bonding.

Maximum deviation in plane must not exceed 6 mm in 3m with no more than 1.5 mm in 0.3 m variation between high spots.

Absorbent substrates may need to be pre-treated with Dukkaboard Aqua77 Pro-Tile Primer, or a primer coat of Dukkaboard Tec-Seal Pro consisting of 1-part Dukkaboard Tec-Seal Pro and 4-parts clean water. Plywood floor surfaces may need a primer coat before applying Dukkaboard Tec-Seal Pro. This can be applied with the same equipment. The recommended primer is Dukkaboard Aqua77 Pro-Tile Primer.

Dampen hot, dry surfaces. Installation may be made on a damp surfaces, but excess water must be swept off.

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The sprayer should produce a maximum of 3300 psi (22.8 MPa) with a flow rate of 3.6 to 6.0 LPM using a 521 or a 631 reversible tip. The hose length should not exceed 3000 cm in length and 9mm in diameter.

Keep the unit filled with Dukkaboard Tec-Seal Pro to ensure continuous application of liquid. Stir membrane before use.

We recommend a few overlapping passes to achieve most even spray coverage. Start with Horizontal passes, overlap 50%, so the surface receives two coats. Next, pass vertically, and overlap again, so the total surface area gets a further two coats.

Within 60 minutes the surface is touch dry, and within 3 hours ready for over-tiling (dependent on atmospheric conditions).

The wet film has a sage green appearance and dries to a darker olive green colour. When Dukkaboard Tec-Seal Pro has dried to a uniform olive green colour, visually inspect the coating for any voids or pinholes.

Fill any defects with additional material. Scratches that do not receive full colouration of paint in a single pass need to be filled first, this will be for example any damage that is A: more than twice as deep as its width, or B: more than 4mm deep.

Check application thickness with a wet film gauge periodically as the Dukkaboard Tec-Seal Pro is being dispensed to ensure that the appropriate thickness and coverage is achieved. The recommended minimum thickness is 0.8mm. Up to 1.2mm can be applied in one application.

To achieve the required film thickness, the coating must be free from pinholes and air bubbles. Do not back roll coating. Bounce back and over-spray will consume more product.

Allow the Dukkaboard Tec-Seal Pro to cure in accord with the instructions. It is important to note that areas not scheduled to receive the Dukkaboard Tec-Seal Pro should be taped off and protected from any potential over spray. Expansion and movement joints should be honoured and treated as outlined.

OPERATOR NOTES

The operator of the spray equipment must have a working knowledge of the equipment used and be able to adapt to the project conditions as the spraying takes place.

As the spray tips wear, adjustments will need to be made. Spray tip selection, pressure adjustments and hose length will have a direct bearing on the results achieved.

AIRLESS SPRAY TIP CHARACTERISTICS

It is important to remember that the orifice size, in conjunction with the fan width size, determines the spray characteristics of the tip.

Examples: As the orifice size increases, while maintaining the same fan width size, the greater the volume of coating will be applied to the same area.

Conversely, the larger the fan width size, while maintaining the same orifice size, will result in the same amount of material being applied over a greater surface area.

Tip Size: LTX521: has an orifice of 0.5mm and a fan width of 250 mm holding the nozzle 300mm from the substrate.
Tip Size: LTX631: has an orifice of 0.8mm and a fan width of 300mm holding the nozzle 300mm from the substrate.

The use of spray tip with a smaller orifice will result in less product being delivered to the substrate requiring multiple passes to ensure a complete coating with optimum thickness.

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TIP WEAR

When beginning a project, choosing the right tip size and fan width will determine how effective the spraying process will be.

The correct tip size will have a direct bearing on how much material is dispensed. However, spray tips will wear with normal use. Older, worn tips will increase delivery time and product consumption. Therefore, changing the spray tips often will result in greater productivity.

Choosing the right spray tip is essential for ensuring a quality finish. It's important to replace a tip when it gets worn to ensure a precise spray pattern, maximum productivity and quality finish.

When a tip wears, the orifice size increases and the fan width decreases. This causes more liquid to hit a smaller area, which wastes waterproofing membrane and slows productivity. Tip life varies by coating.

Extend tip life by spraying at the lowest pressure that breaks up the coating into a complete spray pattern (atomize).

Do not increase the pump pressure as this only wastes waterproofing membrane and causes unnecessary pump component wear.

As a rule of thumb, it is best to replace the spray tips after spraying 110-170 litres of Dukkaboard Tec-Seal Pro.

PRESSURE HOSES NOTES

High pressure hoses need an appropriate level of care. If sharp edges are present in the environment and hoses can possibly come into contact with them, suitable protection is advisable.

Check all hoses for damage and excessive wear daily, and discard if evident.

TIPS

For simplicity it is best to coat walls first then floor, working towards the doorway, avoiding foot traffic on recently sprayed areas.

To avoid over spray, masking up of ceilings can save time. For pro users, holding a mobile masking blade in one hand and spraying with the other saves more time.

As users become proficient, they can experiment with using a narrower spray tip for 'cutting in' and this may eliminate the need for masking altogether.

PROTECTION

Provide protection for newly installed membrane, even if covered with a thin bed of ceramic or porcelain tiles, stone or brick installations, against exposure to rain or other water for a minimum of 2 hours at 21°C and 50% RH.

FLOOD TESTING

Allow membrane to cure fully before flood testing, typically 2 hours after final cure at 21°C and 50% RH.

Cold and/or wet conditions will require a longer curing time. For temperatures 10 – 21°C allow 24 hours after final cure prior to flood testing.

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INSTALLING FINISHES

Once Dukkaboard Tec-Seal Pro has dried to the touch (60mins), ceramic and porcelain tiles, stone or brick may be installed using the thin bed method. The recommended adhesive for use with Dukkaboard Tec-Seal Pro is Validus Velox or Validus Sero. Do not use solvent-based adhesives directly on Dukkaboard Tec-Seal Pro.

Allow Dukkaboard Tec-Seal Pro to cure 2 hours at 21°C and 50% RH before covering with thick bed adhesive, epoxy adhesives, terrazzo or moisture sensitive resilient coverings or wooden flooring.

SPRAY EQUIPMENT SETUP, CLEAN UP AND MAINTENANCE

Follow the airless sprayer manufacturer's instructions on set up, operation, clean up and maintenance of their equipment.

Cleaning of spray tip and 'butterfly guard' – leave to soak when machine idle for 15mins or more.

The airless spraying unit should be flushed, clean and free from any contaminants prior to use.

HEALTH AND SAFETY NOTES

Follow all applicable health and safety requirement when applying Dukkaboard Tec-Seal Pro.

As with any mains voltage machine, electrical shock danger is present. Take care and handle appropriately.

Check cables and connections for damage and excessive wear and discard if evident.

Take care for trailing hoses, watching the distance from spray machine.

The use of protective clothing, safety glasses and a dual cartridge respirator are recommended. See MSDS for further information.

PRODUCT LIMITATIONS

- Do not use as a primary roofing membrane over occupied spaces
- Do not bond to OSB, particle board, interior grade plywood or hardwood surfaces
- Do not use over dynamic expansion joints, structural cracks or cracks with vertical differential movement
- Do not install over structural cracks, cracks with vertical movement or cracks with >3 mm horizontal movement
- Do not use as a vapour barrier (especially in steam rooms)
- Do not expose unprotected membrane to sun or weather for more than 30 days. Use protection boards for temporary cover
- Do not expose to negative hydrostatic pressure, excessive vapour transmission, rubber solvents or ketones
- Do not use beneath decorative wear surfaces, cement or other plaster finishes. Consult with plaster manufacturer for their recommendations when waterproofing membrane is required under plaster finishes.
- The installation of waterproofing membranes in submerged applications must be installed in a manner that creates a continuous "waterproof pan effect" without voids or interruptions. Therefore, applying waterproofing membranes in limited areas (e.g. solely at the waterline) in submerged applications is not recommended

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PRODUCT CAUTIONS NOTES

- Conduct a small test with product before applying to entire area
- Allow membrane to cure fully before commencing tiling
- The maximum amount of moisture in concrete substrates should not exceed 3%
- Allow wet mortars to cure for 72 hours at 21°C prior to installing Dukkaboard Tec-Seal Pro
- Use a wet film thickness gauge to check thickness
- Protect from exposure to traffic, water or cold weather until fully cured
- Dukkaboard Tec-Seal Pro will go from a light sage green to a darker olive green when fully cured
- Flood test prior to applying tile or stone coverings
- Allow Dukkaboard Tec-Seal Pro a minimum 2 hours cure at 21°C prior to flood testing
- All flood test times should be after Dukkaboard Tec-Seal Pro is fully cured with no light sage areas showing
- Dukkaboard Tec-Seal Pro does not have any hazard classification according to directive 99/45 / CE
- Keep out of reach of children
- In case of contact with eyes and skin, wash well with water
- Consult SDS for more safety information

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