



# **A**quaTank

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**A GUIDE TO AQUATANK**

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# AQUATANK

## LATEX BASED WATER RESISTANT BONDING AGENT, PRIMER AND ADMIXTURE

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### PRODUCT DESCRIPTION

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AquaTank Neo-Flex Membrane is a latex based, water resistant bonding agent and admixture for use in areas subject to humidity, dampness and water contact. Improves water resistance of cement mixtures by forming a reinforcing polymer that increases long term durability and flexibility of the mix on renderings and floor screeds. It contains anti-foam to control the density of cementitious mixes.

### USES

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As an admixture for mortar/screeds/renderers.

- As a bonding agent for screeds/renderers.
- As a primer/sealer in tiling applications.
- To increase flexibility for cementitious based tile adhesive when tiling on wooden/asphalt floors.
- In addition, SBR Bond has the advantage over PVA bonding aids in that it is not adversely affected in wet conditions and is therefore recommended for exterior use.

### CHARACTERISTICS / ADVANTAGES

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Greatly improved adhesion to a wide range of substrates including dense concrete, steel, tiles etc.

- Mixes may be applied in much thinner sections
- Excellent resistance to water and water vapour
- A high level of resistance to salt permeation
- Much improved toughness and flexibility
- Reduced surface dusting of concrete
- Greatly improved resistance to many chemicals
- Reduced water: cement ratio for equivalent workability
- Improved frost resistance
- SBR Bond is also freeze thaw stable.

|                               |                                    |
|-------------------------------|------------------------------------|
| <b>pH</b>                     | ca. 9.0                            |
| <b>Viscosity</b>              | 100 cP (RVT 1/10rpm)               |
| <b>M.F.F.T</b>                | 0°C                                |
| <b>Freeze Thaw resistance</b> | Passes 5 cycles at -10°C excellent |
| <b>Calcium Ions</b>           | Compatible                         |
| <b>Aluminium III Ions</b>     | Compatible                         |
| <b>Antioxidant</b>            | Added                              |
| <b>Bactericide</b>            | Added                              |

### PRODUCT INFORMATION

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|                                |  |
|--------------------------------|--|
| <b>Packaging</b>               | 5ltr, 10ltr and 20ltr plastic containers   |
| <b>Colour</b>                  | Grey   |
| <b>Shelf Life</b>              | 12 months from date of manufacture in original unopened containers.  |
| <b>Storage Conditions</b>      | AquaTank Neo-Flex Membrane is best stored at 5 to 25 °C. However if frozen, the latex should be thawed slowly. AquaTank Neo-Flex Membrane should preferably be stirred before use. |
| <b>Density</b>                 | ca. 1.02kg/ltr   |
| <b>Solid content by weight</b> | 38-42%   |
| <b>Consistency</b>             | Liquid   |

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# AQUATANK

## APPLICATION INFORMATION

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### YIELD

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As a rough guide, 1.2 litres of AquaTank Neo-Flex Membrane will cover 1m<sup>2</sup> of 12mm thickness using the below mixes.

### APPLICATION INSTRUCTIONS

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#### Substrate Preparation

All surfaces must be clean, dry and free from dust, grease and other contaminants. The background must be capable of withstanding all stresses which will be put onto it and contain the appropriate joints. If it is to receive a topping the background should have a compressive strength greater than 30N/mm<sup>2</sup> and/or a tensile strength greater than 1N/mm<sup>2</sup>.

Floors should be mechanically prepared, e.g. scabbled or shot blasted, to give an aggregate exposed surface. Dust should be removed by vacuum, not compressed air. All contaminants such as oil, grease, or any surface laitence must be removed to ensure adequate development of bond when the topping is applied. A water drop test is the simplest method to determine whether water repellent contamination is present.

### Mixing

Mixing procedures for topping and screeds containing AquaTank Neo-Flex Membrane are similar to those used to conventional compositions, with gauging water partly replaced by AquaTank Pro-Tile Primer. However, mixing time should be minimised to limit air entertainment.

Mixing should be carried out in a forced action mixer. The usual procedure is to pre-mix sand and cement in the mixer, pour in the AquaTank Neo-Flex Membrane, mix for 1-3 mins, then slowly add water to the required consistency.

NB. Over addition of water causes rapid thinning of latex modified mortars owing to the plasticising effect of the latex.

The mix design depends upon thickness and intended use. However, typically mixes for a 12mm topping or screed are as follows:

|                    | Screed      | Topping                                |
|--------------------|-------------|--|
| O.P.C              | 1           | 1                                      |
| Moist sand         | 3.5         | 1.75                                   |
| 3mm Washed Granite | 0           | 1.75                                   |
| SBR Bond           | 0.2         | 0.2 (ie. 10 litres per 50kg of cement) |
| Water              | As required | As required                            |

All parts are by volume of uncompacted material.

### Application Method / Tools

#### Priming

Application of a primer coat is necessary to obtain maximum adhesion of the topping or screed.

#### AquaTank Pro-Tile Primer – Flooring Applications

This concerns the use of AquaTank Neo-Flex Membrane in screeds and toppings over background concrete. Adding AquaTank Pro-Tile Primer to a floor screed or topping gives the following advantages:

A low water:cement ratio allows a minimum of delay when overcoating is required.

- Reduced permeability to liquids.
- Improved chemical, abrasion and impact resistance.
- Resistance to dusting.
- Thinner screeds, achieving reduction in weight and savings in materials.
- Excellent slip resistance.
- Goods underlay for epoxy surfacing.
- AquaTank Neo-Flex Membrane has a long and successful track record of use in the construction industry.

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# AQUATANK NEO-FLEX MEMBRANE

OFFERS A SIMPLE METHOD FOR MANY WATER PROOFING AND VAPOUR PROOFING APPLICATIONS.

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## ADVANTAGES INCLUDE:

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- Single pack system
- Water based compounds that can be applied even to damp backgrounds
- Non-toxic, non-hazardous, solvent and plasticiser free
- Quick drying. Typically touch dry in 1 hour
- Good bond to many substrates
- Toughness, high flexibility, extensibility and good crackbridging properties
- Low water vapour permeability
- Alkali resistant. Can be applied to alkaline surfaces
- Resistant to silage acids
- Non-staining and stain blocking
- Available in a range of colours

## APPLICATIONS:

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### Tiling

As secondary protection under tiles in wet areas e.g. bathrooms, food processing areas, balconies, etc.

### COVERAGE:

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A minimum dried coating thickness of 0.60mm is needed to provide a vapour barrier. This should be applied in a minimum of two coats. For the final dried membrane thickness to be 0.60mm a coverage rate of 1.20 Kg/m<sup>2</sup> is required (this is the total for all coats). This corresponds to approximately 1 litre/m<sup>2</sup>.



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# APPLYING

## AQUATANK NEO-FLEX MEMBRANE

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- The background surface should be smooth or have a light even texture. Any masonry should be flush pointed and defects in existing surfaces made good.
- The surface needs to be clean and free from dust, loose material or free surface water. The membrane should not be applied in wet conditions or where these conditions are likely to occur before the membrane has dried. The membrane should not be applied when the temperature of the background, or the air temperature, is below 7°C.
- It is sometimes an advantage to pre-wet concrete or masonry backgrounds, so that these are damp but free from any water glistening on the surface, to aid wetting out of the background.
- Because of the wide variety of background types and site conditions it is always advisable to check adhesion to the background by testing on a sample area before starting any job.
- The membrane may be applied by brush, roller or airless spray. If necessary the compound can be diluted with up to 10% water, however care should be taken to ensure that the correct dry coat thickness is applied.
- The thickness of the dried membrane per coat depends on the method of application. For a single dry coat thickness of more than 0.30mm it is recommended that the membrane be applied by airless spray. If airless spray is used single dry coat thickness' of up to 1.0mm can be obtained. Note: A single coat of 0.60mm dry thickness or more will require a greater drying time than for an equivalent multi-coat application.
- If two coats are being applied it is recommended that the coats be applied at right angles to each other.
- Before applying the second coat it is necessary to let the first coat become touch dry. The time required to reach this tough dry condition will vary according to site conditions but will typically be in the order of 1 hour. It is preferable if the second coat is applied within 24 hours of applying the first coat. After all coats have been applied the membrane should be left for at least 4 days before attempting any ponding tests. Under unfavourable drying conditions this period may need to be extended.
- In some situations e.g. at high stress points such as wall/floor junctions it is beneficial to use fabric (scrim) reinforcement. Such reinforcement is available in many types and local availability will often influence choice. Fabric made from polypropylene or polyester is suggested. Fabric made from natural fibres should be avoided. By choosing a suitable reinforcement it is possible to achieve good control of the coating thickness i.e. by choosing a fabric approximately 0.50mm thick and ensuring that the mesh is completely filled and covered, the minimum coating thickness of 0.60mm will be automatically achieved.
- The incorporation of fabric usually increases the tensile strength but decreases the extensibility.
- The fabric is rolled into the wet first coat and then coated with additional membrane after allowing the first coat to dry to a tacky condition.

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# AQUATANK

## NEO-FLEX MEMBRANE

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### STORAGE

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AquaTank Neo-Flex Membrane should be stored in sealed container between +5°C and +35°C and protected from frost and direct sunlight.

Adhesion of materials onto the dried membrane.

### GENERAL

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Many wet applied cementitious materials bond well to the dried AquaTank Neo-Flex Membrane, particularly if they contain polymers. When applying polymer free materials such as screed, render or plaster the highest adhesion results are obtained if the material is applied as soon as the AquaTank Neo-Flex Membrane is tough dry. Alternatively, the surface of the undried AquaTank Neo-Flex Membrane can be blined with clean sharp sand to provide some mechanical key to the subsequent coating.

Bonding agents and BS8204. 0 In order to be classified as a bonding agent, regarding clause 5.1.2 of BS8204 Part 3 1993 "Code of Practice for Polymer Modified Wearing Surfaces", it is necessary for the slant shear strength to be above 20 N/mm<sup>2</sup> after 28 days and for the pull-off strength to be above 2 N/mm<sup>2</sup> after 14 days.

Test results on AquaTank Neo-Flex Membrane are 33 N/mm<sup>2</sup> for slant shear (1 hour drying time for final coat of AquaTank Neo-Flex Membrane, before compacting the mortar onto it.), and 1.3 – 2.1 N/mm<sup>2</sup> for the pull-off strength. The values achieved depend to a large extent on the strength and adsorption characteristics of the background concrete.

### CERAMIC TILE ADHESIVES

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Most single pack ceramic tile adhesives bond well to the dried AquaTank Neo-Flex Membrane coating, even after a drying period of several months. However, the longer the drying period the more opportunity there is for surface contamination. Tile adhesives that have been designed to comply with the draft European Standard for tile adhesives can be expected to have a bond strength (pull-off) to the AquaTank Neo-Flex Membrane of at least 0.5N/mm<sup>2</sup>.

### GYPSUM PLASTERS

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The membrane complies with the bond strength requirements of BS5270 Part 1 1989 regarding bonding agents for use with gypsum building plasters.

### FLOORING ADHESIVES

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Most flooring adhesives bond well to the membrane. When bonding flooring materials such as PVC sheet over the membrane two points should be considered.

It is advisable to use adhesive/floor-covering combinations that are low in plasticiser content. The concrete below the membrane should be sufficiently dry, before the membrane is applied.

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## 4 EASY STEPS TO THE ULTIMATE AQUATANK

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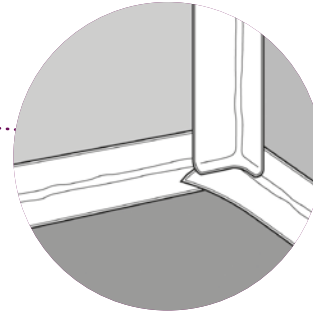
# 1.

Ensure the application area is clean and dry. Apply AquaTank Pro-Tile Primer as instructed on the label.



# 2.

Once the primer is dry, tape all corners and joints with AquaTank SA Tape+.



# 3.

Next apply AquaTank Neo-Flex to the entire area, paying attention to corners and joints.



# 4.

Next apply AquaTank Neo-Flex to the entire area, paying attention to corners and joints.

# AQUATANK SA TAPE+

The self-adhesive waterproof tape seals connection and component joints within the entire building range, however particularly in wet rooms. AquaTank SA Tape+ prevents moisture and damages caused by water, preferentially in the sanitary area (showers, bath, etc.), by application into the gaps of the tile underground.

AquaTank SA Tape+ has a self-adhesive plasto-flexible butyl rubber mass, which adheres outstanding well on cleaned and dry undergrounds by simply removing the masking paper, which is sectioned for optimised workability and pressing onto the underground. This ensures the exceedingly time-saving and simple processing.

AquaTank SA Tape+ is expandable up to twice its original width, due to its special cross direction design, without the long-term ductile butyl rubber adhesive tearing or losing its adhesive force. This enables it to ideally accommodate building movements. This specific flexibility ensures lasting sealing of joints, the plaster surface does not crumble anymore and contact spots do not tear off.

| Technical specifications       |   |
|--------------------------------|---|
| <b>Basis:</b>                  | Butyl rubber adhesive with a tear-proof, cross direction expandable PESfleece coating |
| <b>Colour:</b>                 | Grey  |
| <b>Temperature resistance:</b> | - 30 °C to + 80 °C  |
| <b>Processing temperature:</b> | + 5 °C to + 35 °C   |
| <b>Water impermeability:</b>   | Requirements fulfilled  |
| <b>Adhesive force:</b>         | ≥ 4 N / cm  |

|                           |                |
|---------------------------|----------------|
| <b>Width of tape:</b>     | 75 mm          |
| <b>Thickness of tape:</b> | Approx. 0.8 mm |
| <b>Length of tape:</b>    | 10 m           |

## PROCESSING GUIDELINES:

The underground must be clean, dry, dust-, oil-, bitumen- and grease-free. Large pores are to be levelled out; projections must be made flush with the adjacent areas. It is normally sufficient to remove loose particles and dust from undergrounds, such as concrete, mortar, flush filled brickwork, wood etc. Greasy surfaces or surfaces treated with parting agents, e.g. metals or plastics, are to be pre-cleaned with solvents (check compatibility!).

AquaTank SA Tape+ is processed directly from the roll, whereby the split, projecting masking foil facilitates attachment. It is easily mounted by removing one half of the split masking foil and applying AquaTank SA Tape+, after applying the priming coat to both sides of the prepared joints and waiting for the priming coat to harden and dry completely.

After application continue to detach the masking foil and press AquaTank SA Tape+ on firmly, in order to avoid the formation of air bubbles. In order to avoid a possible loss of adhesive force, ensure that AquaTank SA Tape+ assumes the outlines of the underground after application. Therefore press it firmly onto the underground after application (use pressing roller).

AquaTank SA Tape+ can be covered immediately with all commercially available sealing systems (alternative sealing). AquaTank SA Tape+

is thereby to be completely placed and worked into the cementitious waterproofing membrane (alternative sealing), in such a way, that it is completely embedded. AquaTank SA Tape+ is can furthermore be painted and coated with plaster.

Subsequently apply tile adhesive to the alternative seal and tile. When grouting pay attention to the appropriate joint dimensions and avoid so-called "triangle bevels" by using suitable backfill materials.

Butyl adhesive tapes are naturally ductile. Adhesive tapes with butyl rubber adhesive are solvent-sensitive.

## STORAGE

12 months from date of manufacture in sealed original packaging at a maximum temperature of 30 °C.

Storage at over 30 °C may cause problems when pulling the foil covering off the adhesive.

## ATTENTION! IMPORTANT NOTE:

Above information are based on best present knowledge of current technology, but do not guarantee faultless processing of our products. The information is based on practical results of our tests, but is not binding and does not constitute warranties of characteristics in terms of Federal Supreme Court jurisdiction. Our information does not constitute a legally binding assurance of certain properties or suitability for a specific purpose. Supplementary information by our specialists are merely recommendations, for which no liability is accepted.

Due to the many possible applications of our products, we recommend subjecting the project to a thorough suitability test on original materials before release for further application.

Since our information are non-binding we do not warranty their correctness. For this reason we accept no liability for possible improper processing based on information submitted by our employees.



# AquaTank

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For more information on the AquaTank range, please contact our customer services team on **+44 (0)28 7131 2064** or visit our website

**[QUANTUMGROUPNI.COM](http://QUANTUMGROUPNI.COM)**



When installed in accordance with the manufacturer's guidelines and correctly fixed / adhered to a suitable, stable and durable background, AquaTank is fully guaranteed for 25 years.