 Method Statement

**Aquakem – Surface DPM System**

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| **PREPARED FOR:** |  |
| **CONTRACT:** | Installation of allnex Construction Products;**Aquakem Surface DPM System**Project:  |
| **DATE:** | March 2023 |
| **SCOPE:** | 1. General Conditions of Contract.
2. General assessment and scope of work.
3. Pre-Start Execution
4. Substrate requirements & surface preparation
5. Installation allnex **Aquakem Surface DPM System**
6. Installation of Control Joints / Sealants.
7. Maintenance
8. Quality Assurance
9. Protection Of Work
10. Warranty
11. allnex Approved Applicators
12. Documents to be consulted along with this specification
 |
| **PREPARED BY:** | Colin Nolanallnex Construction ProductsPh - +64 3 366 6802Mob - +64 21 956 160Email - colin.nolan@allnex.com[www.allnexconstruction.com](http://www.allnexconstruction.com)  |
| **NOTES:** |  |

**1.0 GENERAL CONDITIONS OF CONTRACT**

1. All materials shall be installed using best trade practices and in accordance with the manufacturers recommendations or instructions. If any doubt exists please contact allnex construction products for advice.
	1. The Applicator shall take reasonable steps to protect the general public, his work and adjacent surfaces during the time that his work is in progress.
	2. Applicators are required to provide an acceptable Health and Safety programme which meets all the requirements of the current “Health & Safety in Employment” legislation. Applicators must also comply with any other relevant government legislation or local body laws, regulations or requirements.
	3. This specification is to be read in conjunction with relevant product information and conditions of contract which may be issued by the client.
	4. The Applicator is to inspect all areas to be treated and must be satisfied that the surface is satisfactory to receive the proposed allnex system. If any doubt exists it is the responsibility of the Applicator to seek advice from allnex construction products.

1.6 There shall be no substitute materials used unless written approval is provided by allnex construction products prior to the installation.

**2.0 GENERAL ASSESSMENT**

2.1 This specification has been prepared to detail the requirements and ensure client understanding as to the synthetic resin damp proof membrane systems being proposed for the afore-named project.

 The correct installation will increase the durability, life expectancy and aesthetics of the facilities and will also provide site personnel with a safe working environment.

 2.2 Applicators will be required to work closely with the main contractor and / or their designated co-ordinator / consultant to minimise disruption as a result of any work undertaken. Specific time requirements and logistics are to be negotiated directly between the Applicator and the main contractors authorised personnel.

2.3 Any change required during the course of the contract must be in writing.

2.4 The main contractor is to organise the removal of necessary equipment, plant etc prior to the commencement of the contract.

2.5 All food or sensitive equipment likely to be affected by the installation process (e.g. dust) should be removed from the area.

2.6 If for any reason the Applicator is unable to carry out the installation of the allnex system in accordance with this specification, and relevant material data sheets, it is the responsibility of the Applicator to bring this to the attention of the client and / or allnex construction products in writing. This must be done prior to the commencement of the work.

2.7 Applicators are required to clean up all debris etc. from the work area once their work is completed.

2.8 Technical Data

 Refer to allnex Construction Website for the latest technical literature.

**2.9 Properties**

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| **Element** | **Values** |
| Primer Coat: | Aquakem |
| Body- coats: | Aquakem |
| Surface Finish Options:  | *Smooth* |
| Cove Capping Detail: *Optional* | STZ Cove Strip: 5.2 or 9.2 Rebated |
| Joint Sealant: | Sabreseal SMP60 |
| Internal Corner Reinforcement | 1st layer - allnex Joint Safe Tape (85mm x 10m)2nd layer - allnex fibreglass chopped strand matt 300gsm |
| Pot-Life: | +200C ~ 75%RH | 2 Hours |
| Touch Dry: | +200C ~ 75%RH | 4 hours |
| Hard Dry | +200C ~ 75%RH | 24 hours |
| Full Cure: | +200C ~ 75%RH | 7 days  |
| Recoat: ~ Minimum ~ Maximum | +200C ~ 75%RH | 8 hours.24 hours.*After 24 hours: Severe mechanical abrasion* |
| Unaffected by water: | +200C ~ 75%RH | >48 hours |
| SG kg/litre: ~Resin | Hardener | 1.25 |
| Solids Volume: | 42% |
| Solids Weight: | 56% |
| Thinning: | Do Not Thin |
| Clean up: | Warm water & detergent. |
| Dangerous Good Class: | Refer SDS sheets |
| Packaging:  – ~ Aquakem Part A ~ Aquakem Part B  | 8 litre Unit | 20 litre Unit4 litre | 10 litre4 litre | 10 litre |
| Shelf life: | 12 months from date of manufacture~ Store above +20C*(After this period consult with allnex Construction Products)* |

 **2.10 Aquakem – System Types**

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| --- | --- | --- |
| **System Component** | **Aquakem****Roller Applied** **Smooth Finish** **2 x coat system** | **Aquakem****Roller Applied** **Smooth Finish** **3 x coat system** |
| **Note** | **For particularly porous or damaged substrates, or critical environments apply 3 x coats to ensure full coverage without holidays.** |
| **System Type** | Type A | Type B |
| **1st Coat****Coverage** | Aquakem3.0 m2 / Litre | Aquakem3.0 m2 / Litre |
| **2nd Coat****Coverage** | Aquakem3.0 m2 / Litre | Aquakem3.0 m2 / Litre |
| **3rd Coat****Coverage** | N/A | Aquakem3.0 m2 / Litre |
| **Surface Finish** | Smooth | Smooth |

**3.0 PRE-START EXECUTION**

### 3.1 Storage

Accept all materials and accessories undamaged and dry. Store drums, pails and aggregates upright with other material on level surfaces in non-traffic, non-work areas that are enclosed, clean and dry and devoid of solar heat gain.

### 3.2 Handling

 Avoid damage to drums and accessories.

### 3.3 Preparation

Record batches and stock numbers. Follow the allnex QA requirements for preparatory conditioning of materials working temperatures and conditions before, during and after application of the selected systems.

Protect the work from solar heat gain.

### 3.4 Do Not Start

 Work shall not commence until the building is enclosed, all wet work is complete and good lighting is available.

For external applications protect the work area from adverse climatic conditions.

### 3.5 Inspect

 Inspect the substrate to ensure it complies with the requirements of the selected finish system.

### 3.6 Protection

 Protect adjoining work surfaces and finishes during the installation.

**3.7 Site Safety**

3.7.1 Ensure a site meeting has been held to acquaint other site workers with the requirement for closed access to the work area.

3.7.2 Ensure Health and Safety requirements are understood and agreed to prior to the commencement of the

 contract.

3.7.3 Overalls are recommended when using this product.

3.7.4 The use of fans to provide positive forced air draft and/or extraction is recommended.

### 3.8 Technique

 Before beginning the installation confirm the proposed layout of material, location of control joints and other visual considerations of the finished work. *Delete sections that are not relevant to the worksite*

**4.0 SUBSTRATE REQUIREMENTS**

4.1**Adhesion**

 Aquakem (Aquaguard 101) **will not** work if it is applied to paint, flaking paint, old adhesive, lime concrete, plaster or lime plaster.

 4.2 **Cracking of substrate**

 If there is significant cracking to concrete then one should: *Refer: to the Situclad EWS System Method Statement*. This is a fully reinforced system using 300gsm fibreglass chopped strand matt.

 4.3 **Concrete Block**

 If walls are concrete block these must have a full fibreglass laminate using Aquakem and Fibreglass Matt.

 Please refer: *Situclad EWS Method Statement for this type of installation.*

 4.4 **Age and Moisture Content of Concrete**

 Aquakem (Aquaguard 101) can be installed on green concrete.

 *Normally the age of the concrete should be 28 or more days****.***

 Aquakem (Aquaguard 101) however may be applied at around 7 days. *(Surface preparation is critical)*

 It is expected that when installing in this situation, the concrete will have been protected from rain since placement. (A “Green" and saturated concrete combination is not a suitable base).

 In all instance’s normal preparation (shot-blasting or grinding) is still required prior to the installation of Aquakem (Aquaguard 101).

**4.5** **New Concrete**

4.5.1 New concrete shall have a surface which has been mechanically trowelled to NZS3114:1987 U3 finish or better.

4.5.2 A minimum compressive strength of 25 MPA at 28 days cure.

4.5.3 A minimum cure time of 7 days.

 *It is expected that when installing in this situation, the concrete will have been protected from rain since placement.*

 *Green / saturated concrete is not a suitable base.*

4.5.4 For slab on ground installations a suitable vapour resistant membrane beneath the concrete slab is required.

4.5.5 A surface free of cement laitance or other contaminants and any roughly screeded or floated areas.

4.5.6 Remove all concrete curing agents, contaminants and any other material likely to affect the adhesion of the Aquakem.

4.5.7 Cracks in the concrete are to be chased and filled with allnex K125 epoxy paste and fibreglass reinforced using Aquakem and 300gsm chopped strand matt or treated as a control joint as appropriate.

4.5.8 Deep depressions, impact damage, are filled using allnex K125 Epoxy Paste.

4.5.9 Repair of any unsatisfactory falls, levels, etc. are to be installed after the installation of the Aquakem coating using STZ Prefill as appropriate.

4.5.10 Small holes / defects may be filled with allnex Fairing Cream after the application of the Aquakem coating.

**4.5.11 New Concrete Surface Preparation**

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| **allnex recommend mechanical abrasion techniques as the surface preparation method.** |
| Preferred Option | Captive Shot blasting |
| Secondary Option | Diamond Grinding |
| Minimum Requirement | CSP 3 or 4 |
|  *Refer: allnex Surface Preparation Technical Literature* |

 **4.6** **Existing Concrete**

4.6.1 Ensure existing concrete is sound and stable with a minimum compressive strength of 25 MPA.

4.6.2 Remove all contaminants including cement laitance, dirt, grease, oil, fats, existing coatings, unsound substrate etc by steam cleaning, captive shot blasting, grinding, scabbling, hammering etc as appropriate.

4.6.3 All falls and levels to be accurately laid into the concrete.

4.6.4 A surface free of any roughly screeded or floated areas.

4.6.5 No traces of cure membranes.

4.6.6 Cracks in the concrete are to be chased and filled with allnex K125 epoxy paste and fibreglass reinforced using Aquakem and 300gsm chopped strand matt or treated as a control joint as appropriate.

4.6.7 Deep depressions, impact damage, are filled using allnex K125 Epoxy Paste.

4.6.8 Repair of any unsatisfactory falls, levels, etc. are to be installed after the installation of the Aquakem coating using STZ Prefill as appropriate.

4.6.9 Small holes / defects may be filled with allnex Fairing Cream after the application of the Aquakem coating.

 **4.6.10 Existing Concrete Surface Preparation**

|  |
| --- |
| **allnex recommend mechanical abrasion techniques as the surface preparation method.** |
| Preferred Option | Captive Shot blasting |
| Secondary Option | Diamond Grinding |
| Minimum Requirement | CSP 3 or 4 |
|  *Refer: allnex Surface Preparation Technical Literature* |

## **5.0 INSTALLATION OF ALLNEX AQUAKEM SURFACE DPM**

 **5.1 Aquakem Mixing Ratios**

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| --- | --- |
| **Component** | **Volume** |
| **Aquakem Part A**  | 1 part |
| **Aquakem Part B** | 1 part |

 5.1.2 Measure and mix Aquakem Part A with Aquakem Part B into a suitable container, power mix at a slow speed (300rpm) for a minimum of 3 minutes ensuring both components are homogeneously blended

 Scrape the pail sides with a long broad-knife and then mix again.

 *Mix slowly to avoid air entrapment.*

 5.1.3 Ensure no unmixed material remains on the sides, rims or lips of the container.

 5.1.4 Allow material to stand for 2-3 minutes prior to use.

5.2 Application Method:

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| Roller | Brush |

 **5.3 Installation of Aquakem Reinforcement to Cracks and Internal Corners**

 **5.3.1 Fibreglass Reinforcement Preparation**

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| --- | --- |
| **Element** | **Value** |
| Fibreglass Salvage edge: | The salvage edge of the fibreglass matt must be “teased’ prior to installation. |

 5.3.2 The “teasing” of the salvage edge assists with the application so as to not leave a cut edge line

 5.3.3 Ensure the substrate is properly prepared and is suitable to receive the allnex Aquakem finish.

 5.3.4 All floor/wall and internal corner junctions should be Fibreglass taped prior to the full Aquakem application.

 5.3.7 Junctions will require a minimum 150mm wide strip of 300gsm chopped strand fibreglass matt or polyester cloth tape.

 *Note*

*The polyester cloth tape will dry more quickly than the chopped strand mat.*

5.3.8 In all cases, apply a heavy coat of Aquakem body coat and lay in the CSM strip and apply a further body coat. Immediately use a metal laminating-roller *(refer: to allnex range)* to bring the body coat up through the CSM.

5.3.9 Use a garden sprayer to apply a *fine water mist.*

 *This ensures that the Aquakem is fluid and wets the glass readily.*

 5.3.10 Allow to fully dry (*test),* prior to the full installation.

 **5.4 Application of Aquakem Surface DPM Coating**

 5.4.1 Measure and mix Aquakem Part A with Aquakem Part B. *Refer 5.1 – 5.1.4*

 5.4.2 Apply the Aquakem at a spread rate that will ensure the correct system as designed is achieved.

 Work the 1st coat of Aquakem into the surface to ensure a full bond is achieved between the Aquakem and substrate.

 5.4.3 Apply in a manner to maintain a wet edge.

 5.4.4 Allow to cure.

 5.4.5 As soon as the resin has cured in accordance with overcoat times above apply the 2nd finish coat

 *Refer 5.4.1.-5.4.4*

 *This coat is to be applied at right angles to the first coat*

  *Note*

 *Depending on the porosity of the substrate a third coat shall be applied.*

 5.4.6 As soon as the resin has cured in accordance with overcoat times above apply the 3rd finish coat

 *Refer 5.4.1.-5.4.4*

 This coat is to be applied at right angles to the previous coat

**6.0** **INSTALLATION OF CONTROL JOINTS | SEALANTS ETC.**

 **6.1 Joints:**

 All concrete control and construction joints should be carried through the Aquakem System.

|  |  |
| --- | --- |
| **Control | Construction Joints** | **Cold Joints | Non-Movement Joints** |
| Sabreseal SMP60 | Sabreseal SMP60 |
| **Penetrations** | **Cove Cap Sealant** |
| Sabreseal SMP60 | Sabreseal CR |

*Note*

 *The Control Joint Sealants must be installed with a bond breaker.*

6.2 The interface between the allnex Aquakem coating and stainless-steel drains, etc. are to be sealed using allnex Sabreseal SMP60 sealant.

6.3 All penetrations through the floor/coves, are positively sealed using Sabreseal SMP60

**7.0 MAINTENANCE**

Ease of repair is a major advantage with allnex Aquakem coating.

Damaged areas are cut out and patched level using new materials quickly and with little disruption.

**8.0 QUALITY ASSURANCE**

 A log using allnex QA Sheets 1,2 & 3 shall be kept by the installation applicator and made available to allnex at their request. Information to be recorded daily is but not limited to:-

1. Material Batch Numbers
2. Sequence of Mixing ratios and quantities and formula
3. Substrate Moisture Content
4. Substrate Temperature
5. Ambient Temperature
6. Ambient Relative Humidity

**9.0 COMPLETION & PROTECTION OF WORK**

 The Applicator shall take reasonable steps to protect his work and the work of others trades during the time that his work is in progress. The General Contractor during the same time shall keep the floor areas free and clear of traffic. Thereafter, until the building is completed, it shall be the responsibility of the general contractors to protect the allnex floor finish from damage, paint droppings, or other contamination that may prove difficult to remove or detrimental to the finish floor characteristics and performance.

* Check coating has no voids or pinholes.
* All details must be completed in accordance with Specification.
* Ensure Aquakem is fully cured prior to other trades or service.

**10.0** **WARRANTY**

allnex will assure that all products incorporated into this specification have been manufactured to allnex quality specifications and GMP procedures.

allnex will also assure that when correctly applied the system will meet the critical requirements of the allnex design specification.

However, given that allnex has no control over the substrate, the application environment and the application process all warranties are supplied by the approved Applicator and backed by our agreement with them.

The approved Applicator shall provide a warranty based on specific project detail.

**11.0 ALLNEX APPROVED REGIONAL INSTALLATION COMPANIES**

allnex will provide individual advice for specific projects and should be consulted. It is the nature of the trade that contractor skill levels, capability and experience vary.

**12.0 DOCUMENTS TO BE CONSULTED**

● allnex Approved Applicator List  ● allnex Exterior Installation

 ● allnex Product Technical Data Sheets ● allnex Colour Formulas

● allnex Flooring Details● allnex Cleaning Recommendations

● allnex Surface Preparation Document● allnex Technical Bulletins

**Date: March 2023**

**Replaces NA**

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