

MANUAL SECTION	ISSUE DATE	AUTHORISED	REPLACES	PAGE
Waterproofing	Jan 2010	PM	July 2006	1 of 6

AQUAGUARD 101 Waterproofing

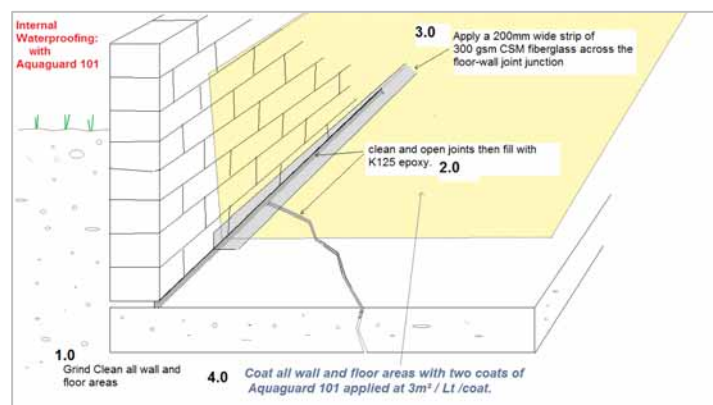
GENERIC TYPE:

Waterbased waterbased epoxy coating supplied in parts A & B, mixed prior to application. Used for waterproofing walls and floors. Applied to the interior side, it is often used to waterproof interior floors and walls from moisture coming from outside or from under floor slabs.

Aquaguard 101 is recommend as a DPC (DPM). It is often used to treat existing floors to create new living spaces.

FEATURES:

- Waterproofing masonry/concrete walls by coating on the inside surfaces.
- Aquaguard 101 is a chemically cured, waterbased epoxy coating which is applied in moderately heavy films.
- Exceeds the waterproofing requirement of the US Federal spec 11-P-001411. Tested to withstand up to 40 psi hydrostatic pressure (equivalent to 28 metres head of water).
- Moisture vapour permeability BS test method 3177:1959 – 9.4gms, mil.m²/24 hours.
- Non-toxic: approved for potable water (AS4020(int) – 1994).
- Will not flow or sag at elevated temperatures.
- Will bond to oil contaminated surface (read text for details).
- Will stop rising damp.
- Used to waterproof floors prior to carpet, vinyl, tiles etc. Compatible with most floor adhesive types.
- Will bond to **green** concrete. Provides a means of laying topcoverings on wet concrete. May be applied to damp surfaces including fresh concrete.
- Compliant with NZBC E2 & E3 (see rear section)
- Compliant with BRANZ : Good practice guide: Concrete floors; section 8.6.4



PROPERTIES:

- Non flammable & very Low odour, Waterbased
- Resists considerable physical damage
- Minimum application temperature +10°C
- Maximum humidity during application and cure 85% RH
- Solids weight – 56% mixed, Solids volume – 42% mixed
- S.G. – 1.25kgs/litre mixed. **Colour:** white, may be tinted to pastel colours. Finish – semi-gloss

SUGGESTED USES:

- Concrete cure control agent
- Mortar admixes
- Basecoat for Terraflake seamless floor system
- Waterproofing under carpet, vinyl, tiles
- Food processing industries
- Waterproofing floor slab in absence of damp proof course
- Basecoat for Situclad E system
- Tank linings
- Basecoat for Aquacolour topcoat

LIMITATIONS & NOT RECOMMENDED:

- Nuplex generally recommend applying waterproofing to the exterior of a below ground wall. If at all possible access the below ground exterior wall and use Bituthene 3000 sheet tanking. Therefore Aquaguard is not intended for new work rather it is used for remedial work where the wall exterior is no longer accessible.
- Not for contact with strong acids, alkalies or aggressive solvents. Use Aquaguard 102 in this environment.
- Unprotected exterior exposure (overcoat with Aquacolour).
- Floors subjected to heavy traffic without protective glaze coating (eg: Aquacolour).
- Over untreated steel.
- Application over actively leaking water.
- On red (clay) bricks, plaster, limed plasters, old paints, old adhesive. See surface preparation below.

APPLICATION:

a) **Surface Preparation**

It is essential that concrete surfaces are prepared well. Aquaguard 101 works by bonding tenaciously to **concrete** surfaces. All paint, adhesive or other coatings must be removed. On concrete surfaces the weak concrete surface layer must be removed by grinding, sandblasting, shotblasting or acid etching. Acid etching has proved simple and effective with Aquaguard (remember Aquaguard bonds to damp surfaces).

Paint and/or adhesive is removed by the use of commercial angle grinders, water blasting or sand blasting.

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

(i) **Cracks or floor joints:**

Aquaguard will **not** fill or cover large cracks. Fill these with Araldite K125 prior to application of Aquaguard 101.

AQUAGUARD 101 (cont'd)

(ii) Fine Cracks

If these cracks are suspected of, or have the potential for movement then the cracks must be pretreated. Laminate a strip of 300gsm chopped strand fibreglass matt (CSM) over the joint using mixed Aquaguard 101. The strip is normally 150-200mm wide. Ensure the strip is fully saturated with Aquaguard 101. Ensure this is well dry prior to application of the first coat of Aquaguard 101. A wall-floor junction of, for example, concrete blocks and a concrete floor may well benefit from a laminated tape from the wall to the floor. This strip may well stop any fine crack seepage.

(iii) Exterior Decks or Tanked Floors (Concrete)

An exterior concrete deck may not be fully waterproofed with just Aquaguard 101. This is because joints and cracks will move and cause cracking in the Aquaguard 101. Cracks and joints can be treated as in (i) above **or** fully laminate the deck with 300gsm CSM (overlapped). This is the basis of the Situclad EWS system (refer to that data sheet). Once dry, apply a further coat of Aquaguard 101. Once cured, coverings may be applied eg: Terraflake system, floor levelling, carpet, tiles, Aquacolour topcoat.

b) Mixing and Application

Ensure that you have **part A** and **part B**. Mix them individually. Add them in measured equal volumes. Stir until uniform with an electric drill and paint stirrer.

Once mixed the product may be applied with brush or roller. Apply evenly. The first coat should make the surface uniformly **white** (not grey). This implies the application of the correct coverage rate of material.

As soon as the surface can be walked on, the second coat may be applied. **Normally** the two coats are applied on subsequent days. Allow one full day to cure prior to the application of adhesive, levelling compounds etc.

Drying Conditions: Aquaguard 101 cures by first **drying** and then the **curing** of the epoxy system occurs. Good ventilation to remove moisture vapour must be available. Open windows and doors. Heat rooms if very cold. Warmth and air movement help cure. Under poor conditions, **white cement** can be used to accelerate the cure. Add one cup (300mls) of white cement to 4 litres of mixed Aquaguard 101. Mix well and apply quickly, as the pot life will be shortened.

USE UNDER TOPCOVERINGS: Aquaguard 101 is used to stop moisture coming up under vinyl, carpets, tiles etc. For use under vinyl certain techniques must be used as waterbased adhesives will not dry between the Aquaguard 101 and vinyl i.e. they are both impervious. Contact adhesives may be used to bond the vinyl to the Aquaguard 101. A layer of floor levelling compound (eg: Nuplex screed systems) is often used over the Aquaguard 101 to absorb adhesive moisture. This has been found to be effective.

FLOOR LEVELLING: Old floors often require both waterproofing and floor levelling. It is essential that the Aquaguard 101 is applied first to the prepared concrete. Floor levelling compounds are then applied to the Aquaguard 101.

NB: Prior to the installation of flooring levelling compounds, prime the Aquaguard 101 with Lockfast Neoprime. This should be left no longer than 2 hours prior to the installation of the FLC. If a longer time elapses a further coat of Neoprime is to be applied.

SOLID PLASTER: If applying solid plaster over cured Aquaguard 101, prepare a slurry coat of cement and **ARAPLEX 2000** and prime the wall with this mixture prior to full plastering.

GREEN CONCRETE: Aquaguard 101 can be laid on green concrete. Normally the age of the concrete should be 7 or more days. It is expected that laying in this situation, the concrete will have been protected from rain since laying. Green / saturated concrete is not a suitable base. In all instances normal preparation (shotblasting or grinding) is still required prior to laying Aquaguard 101.

FLOOR COATING:
(Trafficable) If Aquaguard 101 is to be used as a floor coating, it then requires overcoating with two coats of Aquacolour. This system is called AQUACOLOUR waterproofing. (**NB:** Ensure the AG101 is cured 48hrs prior to the application of Aquacolour). Terratuff may also be used over fully cured Aquaguard 101. Both these topcoats will convey trafficability to Aquaguard.

APPLICATION METHOD: Brush, roller or spray (if sprayed then follow-on with roller).

MIX RATIOS:

Either by volume or weight, 1:1 part A and B. Mix the two parts with a paint mixer bit and a power drill.

PRODUCT REQUIREMENTS:

Total requirement (2 coats) is worked out on 1.5m²/litre or 3m² /Lt / coat

Examples: A 12m² floor requires 8 litres (4Lts A plus 4 Lts B).
Or a 20lt kit (10A + 10B) will finish 30m² (2 full coats).

THINNING:

Not recommended, but may be thinned up to 10% with clean potable water.

TINTING:

May be tinted to pastel colours with universal paint stainers up to 10% by volume in **part A** before mixing two parts.

DRY TIMES:
(25°C 50% RH)

Surface dry: 4 hours
Hard dry: 24 hours
Full cure: 7 days

Pot life (mixed): 2 hours

Do not use beyond pot life. If overcoating with solvent based products allow at least 4 days to cure.

CLEAN UP:

Warm water and detergent. Semi gelled material may be removed with Nuplex Cleaning solvent.

CAUTION:

- Prolonged contact may cause mild skin sensitisation in some individuals.
- Provide adequate ventilation in confined areas. This will also aid drying and curing.
- Do not allow condensation to form on film during cure.

PRODUCER STATEMENT:

Nuplex Industries Ltd state that Aquaguard 101 is fit for the purpose of waterproofing interior surfaces against reverse osmotic pressure and controlling moisture ingress into a building. It conforms to the relevant parts of the New Zealand Building Act.

Details:

1. **E3 Internal Moisture:** 1.0 Condensation control: Aquaguard 101 will prevent water ingress through walls and floors.
3.0 Water splash: The use of Aquaguard 101 and fibreglass cloth will act as a waterproof membrane.
2. **E2 AS1 External Moisture**
12.2.2 DPM materials part (e) Aquaguard 101 is an epoxy waterproofing membrane formulated to prevent moisture entering the structure. This product is normally used in retrofit (post applied) applications.

PACKAGING:

4 litres: 2 litres A, 2 litres B (handyman kit)
8 litres: 4 litres A, 4 litres B (boxed kit)
20 litres: 10 litres A, 10 litres B (pails)

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