

E3 INTERNAL MOISTURE SOLUTIONS AND PRODUCTS

E3 Internal Moisture

-- WET AREAS

Product	Compliance to E3 Clause	Applications	Warranty
WOOD FLOORING	Internal moisture: Performance clauses E3.3.3 and E3.3.6	Wet area floors	15-30years

NZBC E3/AS1 (Acceptable Solution)

- E3.3.3 Floor surfaces of any space containing sanitary fixtures or sanitary appliances must be impervious and easily cleaned.
- E3.3.6: Surfaces of building elements likely to be splashed must be constructed in a way that prevents water splash from penetrating behind linings or into concealed spaces.

Compliance with E3

- *No specific methods*
- E3.3.3 Laboratory testing – impervious
- E3,3,3 Easily cleaned – In-History Refer to the care and clean requirement.
- E3.3.6 Installation Instructions - For the splash areas, further installation methods

Laboratory testing - Impervious

E3 Performance clause	Methods
<p>E3.3.3 impervious Floor surfaces of any space containing sanitary fixtures or sanitary appliances must be impervious and easily cleaned.</p>	<p>ISO 4760:2022(E) TOPICAL MOISTURE RESISTANCE – ASSEMBLED JOINT ISO 20251:2016 – WATER IMPERMEABILITY TEST</p>
<p>Test name: ISO 4760:2022(E) Laboratory: NZWTA - New Zealand Wool Testing Authority Ltd</p> <p>Test Method:</p> <ul style="list-style-type: none"> The sample was cut into pieces then connected using the profiled locking edges and fastened into an assembled floating "T joint" configuration as per the test method. The testing was performed in triplicate. Weights were not used on these samples. 100mls of dye solution was applied onto the sample surface. It was poured into a cylinder 100mm diameter placed in the center of the sample at the "T joint." Sealant was used at the plank/cylinder interface to avoid leakage. The sample was placed on white paper towels prior to testing to enable detection of any dye penetration through the joints. The sample was left at 20 oC, 65% Relative Humidity room conditions for 24 hours after the dye was added and then examined for dye penetration through the backing (not 23°C, 50% RH as stated in the method). If swelling measurements are requested, thickness measurements are taken at specified test positions -before water, within 15 minutes after water removal (qualitative and quantitative) and 24 hours after removal of water (qualitative and quantitative). Quantitative measurements are used to calculate surface swell in mm (within 15 minutes after water removal) and recovery swell (24 hours after removal of water) 	
<p>Test name: ISO 20251:2016 Laboratory: NZWTA - New Zealand Wool Testing Authority Ltd</p> <p>Test Method:</p> <ul style="list-style-type: none"> 3 sample are taken, each at least 350 x 350mm The sample are are conditioned and tested at 20 and 65% RH. Each sample is placed on top of clean white tissue paper, with the use surface . A PVC cylinder 85 mm diameter(modified from 110mm) is placed in the Centre of each. 100ml of coloured liquid (water and dye) is poured into the centre of each cylinder. After 24 hours the white tissue is examined for evidence of water penetration thought the backing. 	

- The sample were tested on the joins along its long side.

NZBC CODE CLAUSE	Test Result
E3 Internal Moisture E3.3.3 impervious	ISO4760 NZWTA to demonstrate that sample test result "NO migration of water along the upper surface, No migration of water to the underside."
<p>The acceptable solutions and verification methods, NZ BUILDING CODE E3 internal moisture define on page 9 definitions-" impervious", that which does not allow the passage of moisture. while E3.3.3 and E3.3.6 require impervious surfaces for sanitary appliances, the impervious performance criteria compliance covered in page 11 mentions" No specific methods have been adopted for verifying compliance with the performance of NZBC E3."</p> <p>In summary, the objective (3.1) and functional requirement (3.2) of E3 is to prevent illness/ injury or damage through the accumulation of moisture, or damage caused by free water penetration.</p> <p>This ISO test method 4760 is used internationally and has been independently performed in New Zealand. the result of this test verified that this product's assembled joint over a 24-hour period did not allow water penetration through to the substrate, or if tested at the edges where ed sealant has been applied.</p> <p>Through the test methods ISO4760 and test results NO migration of water along the upper surface, no migration of water to the underside, we can confirm that the product is impervious.</p>	



No. 1231218.7A

(Please quote this number in all correspondence)

CLIENT:
Classiq Quality Floors
58 Devon Street East
Neww Plymouth 4310

SAMPLE RECEIVED FROM:
Classiq Quality Floors

Date Received: 5.6.18

Attn.: Werner

SAMPLE DESCRIPTION:
Engineered wood flooring – Plywood planks for covering.

Client Order No.:

Client Reference:

1 of 1

ISO 9239.1: 2010 Part 1 - Reaction to Fire Tests For Flooring. Determination of the Burning Behaviour Using a Radiant Heat Source

Note: This test was subcontracted (test no. 18-003140).

CHF Value	1	2	3	Mean
Length (kW/m ²)	4.6	4.3	4.3	4.4
HF – 30 Value				
Length (kW/m ²)	4.8	5.3	4.4	4.8
Smoke Value				
Length (%.min)	18	16	11	15

The test results relate to the behaviour of the test specimens of a product under the particular conditions of the test, they are not intended to be sole criterion for assessing the potential fire hazard of the product in use.

Sample was conditioned in accordance with BSEN 13238:2010 at a temperature of 23 ±2°C and relative humidity of 50 ±5% for a minimum of 48 hours prior to testing.

Each specimen was adhered to a substrate of 6mm thick fibre reinforced cement board using Roberts 656 adhesive and clamped prior to testing.

"THIS REPORT APPLIES ONLY TO THE SAMPLES TESTED"

Samples and their identifying descriptions have been provided by the client unless otherwise stated. NZWTA Ltd makes no warranty, implied or otherwise as to the source of the tested samples. The above results are designed to provide THE CLIENT WITH GUIDANCE INFORMATION ONLY. This document shall not be reproduced except in full.

L A Greer
Signatory


C Judan
Signatory

28/05/2019

New Zealand Wool Testing Authority Ltd

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Ahuriri, Napier 4144, New Zealand

T +64 6 335 1086, F +64 6 835 6473 Email: testing@nzwta.co.nz

NZBC CODE CLAUSE	Test Result
E3 Internal Moisture E3.3.3 impervious	ISO 20251 WATER IMPERMEABILITY
<p>The acceptable solutions and verification methods, NZ BUILDING CODE E3 internal moisture define on page 9 definitions- " impervious", that which does not allow the passage of moisture. while E3.3.3 and E3.3.6 require impervious surfaces for sanitary appliances, the impervious performance criteria compliance covered in page 11 mentions" No specific methods have been adopted for verifying compliance with the performance of NZBC E3."</p> <p>In summary, the objective (3.1) and functional requirement (3.2) of E3 is to prevent illness/ injury or damage through the accumulation of moisture, or damage caused by free water penetration.</p> <p>This ISO test method 20251 is used internationally and has been independently performed in New Zealand. the result of this test verified that this product's assembled joint over a 24-hour period did not allow water penetration through to the substrate, or if tested at the edges where ed sealant has been applied.</p> <p>Through the test methods ISO20251 and test results WATER IMPERMEABILITY</p>	

In History – Easily Cleaned

E3.3.3 Cleaned method

Following Care and Clean

Normal cleaning to remove surface debris is accomplished using a broom or vacuum cleaner. To remove normal stains and dirt, the floor should be cleaned with a lacquered floor cleaning spray. Simply spray evenly across the floor, allow a minute to work on any stubborn marks, and simply mop over.

1. Remove loose dirt with a soft bristle broom.
2. Clean with a damp mop for everyday care.
3. Wash the floor occasionally with a gentle (non-abrasive) floor cleaner – always follow cleaning product instructions and adhere to cautions before use.
4. Do not use detergents, abrasive cleaners or “mop and shine” products. These may leave a dull film on your Flooring.
5. When using a vacuum cleaner, disengage the beater bar or use the “bare floor” setting to avoid damaging your Flooring.
6. Highly abrasive scrubbing tools are not recommended as they can damage your Flooring.
7. Never use ammonia or bleach to clean your Flooring.
8. Due to the high temperatures, steam mops may cause damage to wood Flooring.
9. Make sure furniture legs are smooth and won't mar your FLOORING.
10. Replace any small, narrow, metal, or dome-shaped glides with smooth protectors that are in flat contact with the floor.
11. Place heavy-duty furniture casters or cups at the contact points of furniture or appliances you don't often move.
12. Never push, pull, or drag furniture, appliances or other items across the floor. Always lift and carry.
13. If you have to slide furniture or appliances, lay a plywood panel on your floor and “walk” the item across the panel.

Watersplash Areas

E3.3.6 For the splash areas, further installation methods

Surfaces of building elements likely to be splashed must be constructed in a way that prevents water splash from penetrating behind linings or into concealed spaces.

Use the 4-in-1 installation method to further enhance the overall subfloor waterproofing. Strengthen water impervious through installation methods. From Our underlay product to underlayment or vapor barrier to waterproofing membranes and sealing gap, 1 in 1 ([1]+[2]+[3]+[4]) 100% sure that water cannot damage the subfloor structure, 4 in 1 is perfect water imperviously system.

[1]Product

[1.1] Product joint

The floor has two joint methods, one is Click-lock, the other is T&G. Click-lock timber wood flooring.

[1.1.1] Click-lock system once installed the planks are sealed the other plank. This system provides protection from water splash. Suitable for floating and glue down flooring installation.

[1.1.2] T&G system is each piece has a slot (the groove or dado) cut all along one edge, and a thin, deep ridge (the tongue) on the opposite edge. The tongue projects a little less than the depth of the groove. Two or more pieces thus fit together closely. Suitable for glue down flooring installation.



[1.2] Product Coating – 8 times coating

Our polyurethane(Lacquer) and hard-wax oil flooring product is a modern wood finish that is commonly used on flooring . It is fast drying, impervious to water, and maintains its transparency as it ages. Lacquer finishes are popular because they don't yellow with age, protect well against liquids, and require very little maintenance.

[1.2.1] Polyurethane (lacquer) finishes product surface sealed with a suitable durable coating. It is worth noting that water-based polyurethane coatings are included under point 2.3.3.1 of the code of practice for wet area membrane systems under 2.3.3.1 E3/AS2 as “water-borne polyurethane and polyurethane hybrids”.

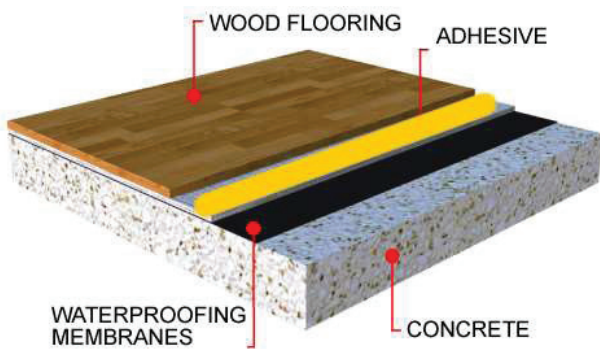
[1.2.2] Hard Wax oil form an elastic, microporous surface that protects the wood from external moisture and abrasion. The UV Curing process in the factory gives UV Oiled Floors a consistent sealed coating. This film is flexible and creates a soft matte finish that is water-repellent.

[2] Install

Installation methods to ensure water impermeability. Glue down and floating.

[2.1] Glue Down

Fully Glue-down installation for all timber flooring products will achieve an Alternative Solution approval as it completely minimizes the natural movement of the timber which prevents gaps or cracks within the finish.



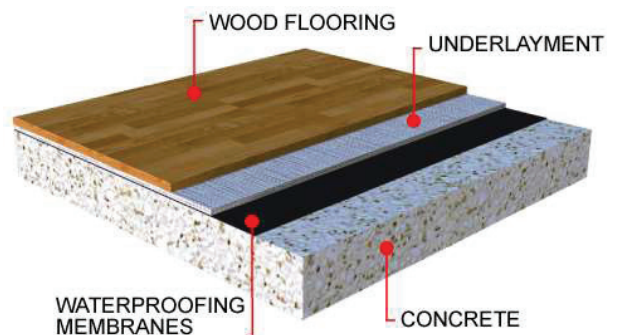
The adhesive adheres 100% to the sub-floor and forms a seal that makes it impermeable.



We require that installation guidelines must be followed when installing floors in wet areas.

[2.2] Floating Underlayment

Install underlay it will 100% cover the subfloor before installing timber wood flooring. Underlay creates a waterproof barrier and is sealed between the subfloor and the flooring.



Underlayment is the spongy, closed-cell plastic foam sheet that comes in rolls. is air and moisture-tight seal, the underlay is Impervious.



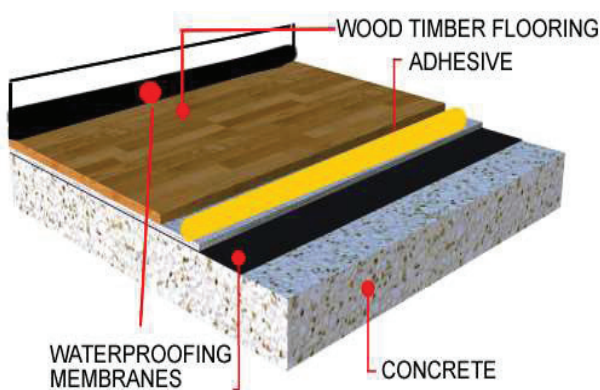
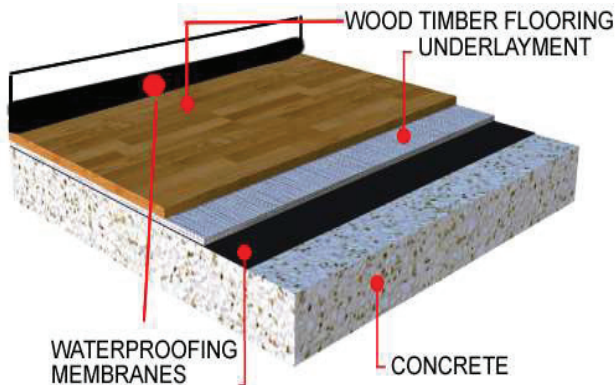
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[3] waterproofing sub-floor

Waterproof polyurethane

waterproofing membranes cure to form an elastic waterproof seal that can be applied using a roller, brush or an airless spray gun. As polyurethane membranes cure, they form a waterproof seal that is free of seams. Approved AS/NZ 3740.

[3.1] Both glue down and floating are required 100mm waterproof membrane return applied up Wall.



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[4] Staerk silicone N60

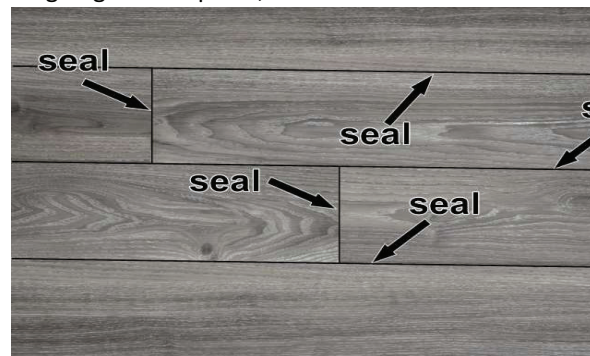
To further protect the perimeters and joint from water ingress, Installer will seal gaps between planks in Kitchen, toilet, laundry, and bathroom. In open-plan spaces, the flooring surface shall extend at least 1.5 m from all sanitary fixtures and sanitary appliances. The sealed and transparent silicone adhesive should use at the ends of planks and the long edge of the plank, This must also include perimeter protection from water ingress.

About

<https://staerk.co.nz/products/sealants/staerk-neutral-cure-sealant-n60/>



The sealed or foam rod and transparent silicone adhesive should use at the ends of planks and the long edge of the plank,.



Installation Accessories recommend.

The products we recommend have been thoroughly market-tested and have been in use for many years. We strongly suggest prioritizing these products for use, also similar products may also be suitable.

Selleys VBS Vapor Barrier



Selleys liquid Nail Glue



Handley UNI-STICK Glue



Underlayment



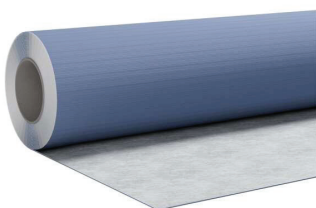
Underlayment



Underlayment



Waterproof sheet membrane



Waterproof membrane liquid polyurethane



STAERK SILICONE SEALANT

