

E3/AS1 Solution 2: Lacquer + Uniclic/Unifit X Engineered Wood Flooring

This document supersedes 'Parky - E3/AS1 Alternative Solution for Amendment 7'

Overview

There is a requirement that flooring solutions must now have a finish that is both impervious and easily cleaned and in open spaces, this surface must extend at least 1.5m out from all sanitary fixtures (including sinks and basins) and appliances (including washing machines and dishwashers). Timber flooring is no longer an Acceptable Solution but can be used in kitchens, laundries and powder rooms as an Alternative Solution. We do not recommend or warranty timber flooring for use in bathrooms.

The Acceptable Solutions and verification methods, New Zealand Building Code E3 Internal Moisture defines 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 about sanitary appliances/fixtures, 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." In summary, the Objective (3.1) and Functional requirement (3.2) of E3 is to prevent illness/injury or damage through accumulation of moisture, or damage caused by free water penetration.

Uniclic/Unifit X Click System Joint Products Covered

- Milk Oak
- Ivory Oak
- Essence Oak
- Natural Oak
- Essence Oak
- Desert Oak
- Dune Oak
- Valley Oak
- Frozen Walnut
- Smoked Walnut
- Mountain Oak
- Bespoke Uniclic/Unifit X with lacquered finish

B2/AS1 Durability & Maintenance

Durability Requirement

B2/AS1 Table 1

The durability Requirement for “Floor Coverings - Protective or Acoustic Coverings” is 5 years.

The durability requirement applies to the full floor build up system rather than just the surface finish.

Timber flooring in Bathrooms are outside the scope of this alternative solution.

Durability Evidence of Compliance

B2/VM1 1.1.1 In-service history

VidaSpace have supplied Parky Lacquer Uniclic/Unifit X timber flooring products to the New Zealand market for over 7 years and they have been used for longer periods in global markets including in kitchens and laundries.

B2/VM 1.2.1 Laboratory testing

VidaSpace engaged NZWTA Textiles and Material Testing - Napier, NZ to conduct independent testing on the passage of moisture for all VidaSpace timber flooring products, and all have passed this test. See method 1. Impervious Surface for test results.

E3 Impervious Surface

The objective of E3 is to safeguard people against illness, injury, or loss of amenity that could result from the accumulation of internal moisture. To meet this objective buildings must be constructed to avoid fungal growth and excessive moisture or free water overflow. Floor surfaces in wet areas must be impervious, easily cleaned, and have ventilation to meet conditions for health and safety.

Impervious is defined in the E3/AS1 Acceptable solution as "Impervious – that which does not allow the passage of moisture". While performance clauses E3.3.3 and E3.3.5 require impervious surfaces around sanitary fixtures/appliances, there are no verification methods provided. Refer to page 11 of E3/AS1 which states "No specific methods have been adopted for verifying compliance with the Performance of NZBC E3"

As there are no specific methods for verifying compliance, VidaSpace had our flooring products tested by NZWTA Textiles and Material Testing - Napier, NZ. See Method 1. Impervious Surface for test results.

As commented on page 16 of E3/AS1 - "Other floor finishes may also be capable of satisfying the performance for impervious and easily cleaned, if installed in a manner that prevents gaps or cracks within the finish and at any parts of its perimeter that are exposed to water-splash, and/or if the surface is sealed with a suitable durable coating."

The following methods to achieve an Alternative Solution for kitchens, laundries and powder rooms:

1. Impervious Surface

Test No. 1434615.9

Date Tested: 27/9/2022

Testing Authority: NZWTA Textiles and Material Testing - Napier, NZ

Test Name: ISO 4760:2022(E) Laminate Flooring - Topical Moisture Resistance – Assembled Joint (MODIFIED)

Test Method:

- 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 centre 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°C, 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).

Purpose of test: Demonstrate the flooring is impervious and meets the objectives in the Building Code

Joint System: Uniclic/Unifit X System Joint

Product Finish: Lacquered

Test Summary: 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 edge sealant has been applied.

NZWTA test report is available on request. Contact us at info@vidaspace.co.nz

2. Durable Coatings

VidaSpace Engineered timber flooring products are factory coated with multiple coats of leading brands of water-based lacquer (polyurethane). These are water, dust and stain resistant. This coating is warranted and tested for use in kitchen and laundry applications by the manufacturer and have had extensive in-service history in New Zealand and globally.

3. Easily Cleaned

E3.2 Buildings must be constructed to avoid the likelihood of (a) Fungal growth or accumulation of contaminants on linings and other building elements

VidaSpace Engineered timber floors with a lacquered finish are easily cleaned using a vacuum and a damp mop. We supply detailed care and maintenance guides with our wood floors along with the option to supply ongoing the correct products or we can recommend suitable ones available on the market. Cleaning methods recommended are comparable to those required for other floor finishes that are still classified as an Acceptable Solution e.g. vinyl.

Refer to: *VidaSpace Floor Care Guide – care and maintenance guide with recommended products for lacquered wood flooring*

Architectural Specifications to achieve an Alternative Solution for E3/AS1

- Masterspec Work Section: 6312VS VidaSpace Timber Overlay Flooring System
- Install Method Option 1: Glue down - Refer to Floor Build-up Guides
 - o Install accessories (refer to installation guide)
 - Marldon MXS140 Damp Proof Membrane or Sabre WE2 Epoxy Moisture Barrier
 - Marldon MXA200 Wood Floor Adhesive
- Install Method Option 2: Floating - Refer to Floor Build-up Guides
 - o Install accessories (refer to installation guide)
 - Marldon MXS140 Damp Proof Membrane or Sabre WE2 Epoxy Moisture Barrier (if required)
 - Provent Underlay
 - Kingley Silver Underlay
 - Kingley Gold Underlay
- VidaSpace recommend using Bona Gap Master Sealant (or similar) around perimeter 1.5m out from sanitary fixtures & sanitary appliances where the floor meets cabinetry or skirtings.

Design Considerations

- Flexible sealant can be colour matched to the flooring or cabinetry to disguise it
- Ensure an industry trained professional is engaged to do the installation
- These methods apply to Lacquered Uniclic/Unifit X products in any pattern of wood floor – plank, herringbone, chevron.

F2 Hazardous Building Materials

All VidaSpace Timber Floorings products are low formaldehyde and meet an E1 rating. Please refer to individual product technical data sheets for full test standards and results.

References

Documents/guides referred to can be found on our website: <https://vidaspace.co.nz/downloads/>

- CareGuide
- Glue Down Installation
- Floating Installation
- Technical Datasheets

Special Notes & Exclusions:

1. Projects consented prior to 4th November 2021, Amendment 6 is still included as an Acceptable Solution so timber flooring can still be used on that basis and does not require to be changed to an Alternative Solution under Amendment 7 as outlined in this document.
2. Timber flooring is still deemed an Acceptable Solution in other areas not near sanitary fixtures or appliances e.g., living rooms, bedrooms, hallways, entrances and stairs.
3. Replacement of existing timber flooring, paneling, or sarking does not require building consent (unless there is other consent-ed works as part of the refurbishment). Full information on what building work doesn't require a consent can be found here <https://www.building.govt.nz/assets/Uploads/projects-and-consents/building-work-consent-not-required-guidance.pdf>