

Jacobsen®



Karndean Knight Tile Gluedown LVT

E3/AS1 INTERNAL MOISTURE COMPLIANCE DOCUMENT
KARNDKIAN KNIGHT TILE GLUEDOWN LVT

1. INTRODUCTION

This document demonstrates how Karndean Knight Tile Gluedown LVT flooring complies with the requirements of Clause E3 Internal Moisture of the New Zealand Building Code (NZBC). It provides information on testing, product performance, installation requirements, and supporting standards relevant to E3/AS1 (Amendment 7).

2. NZBC E3 – OVERVIEW OF AMENDMENT 7

Amendment 7 to Acceptable Solution E3/AS1 came into force on 3 November 2021, replacing Amendment 6. The amendment includes:

- Reclassification of:
 - Dishwashers and washing machines as sanitary appliances
 - Basins and sinks as sanitary fixtures
- A requirement that flooring surfaces must be impervious and easily cleaned for at least 1.5 metres from all sanitary fixtures and appliances.

Impervious is defined as a surface that does not allow the passage of moisture.

E3 applies to all spaces where moisture may accumulate, including kitchens, bathrooms, laundries, powder rooms, ensuites, and sculleries.

3. IMPERVIOUS REQUIREMENTS AND VERIFICATION

E3/AS1 provides a functional definition of “impervious” but does not mandate a specific test method for proving compliance.

To demonstrate compliance, Karndean Knight Tile Gluedown LVT flooring has been evaluated using ISO 4760 (Laminate Flooring – Topical Moisture Resistance Test), that Jacobsen have adopted as suitable for testing other plank products such as:

- Luxury Vinyl Tile (LVT)
- Hybrid flooring (Rigid Core LVT)
- Laminate flooring
- Engineered timber flooring

Testing was completed by the New Zealand Wool Testing Authority (NZWTA), an IANZ-accredited laboratory. ISO 4760 is used as an alternative solution pathway for verifying compliance with NZBC E3.



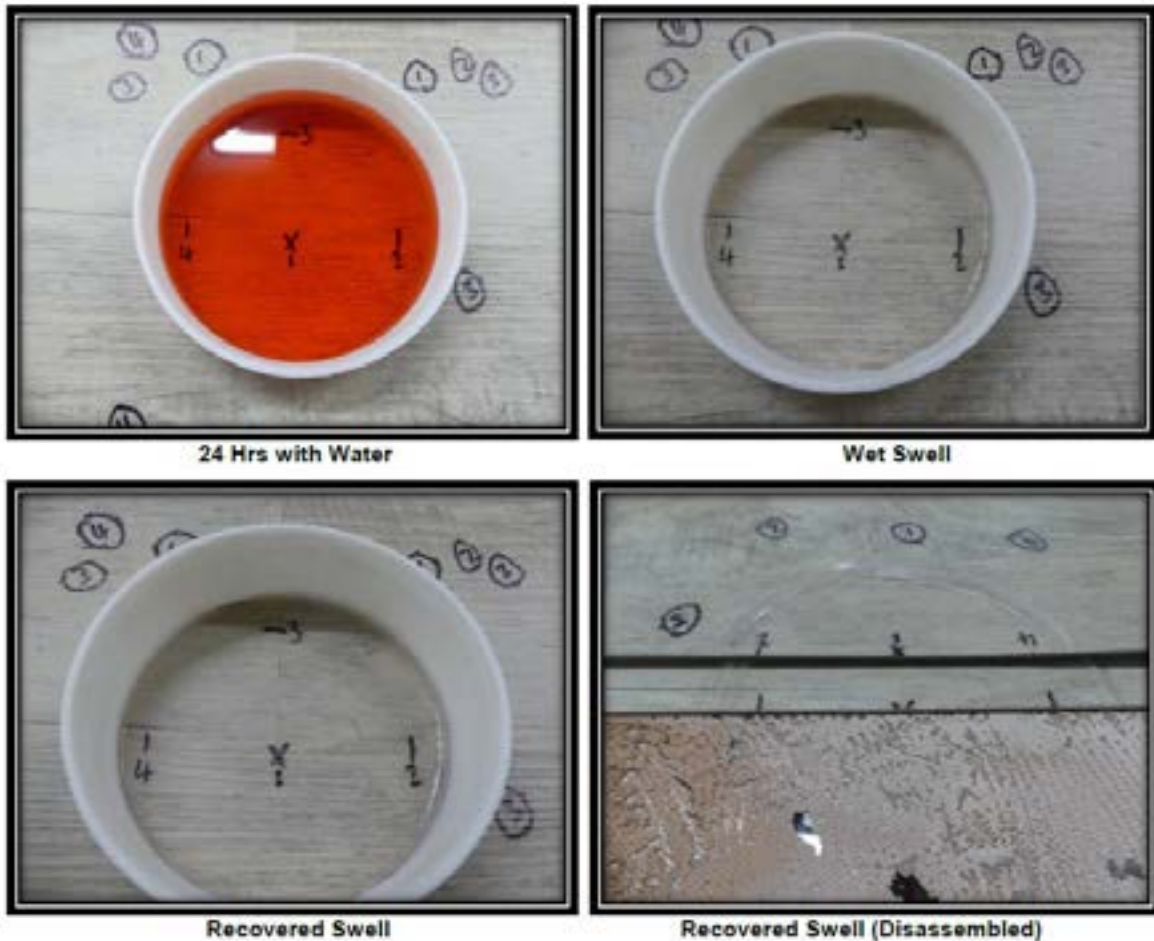
4. ISO 4760 TEST METHOD – SUMMARY

The ISO 4760 test evaluates the ability of a flooring system to resist topical moisture penetration.

Principle

- Flooring samples are assembled and installed to the manufacturer's instructions.
- A dyed water solution is applied over a T-joint and left for 24 hours.
- Samples are examined for:
 - Dye penetration
 - Moisture passage through joints
 - Visual change or swelling

The test is carried out in NZWTA's Napier, New Zealand laboratory.



Result for Karndean Knight Tile Gluedown LVT flooring

Testing confirmed:

- No visible change in the flooring surface or joints.
- No moisture penetration through the joint system to the substrate.
- The flooring performed as an impervious system when installed in accordance with the manufacturer's method.

5. INSTALLATION REQUIREMENTS FOR E3 COMPLIANCE

To ensure compliance with NZBC E3, Karndean Knight Tile Gluedown LVT flooring must be installed according to the Karndean Knight Tile LVT Gluedown flooring *Installation Guide*, with the following additional considerations:

Membranes

- A single-part or two-part membrane may be used where specified by the project requirements where enhanced protection is desired.
- Membranes may be recommended in high-moisture areas such as:
 - Bathrooms
 - Shower rooms
 - Laundries
 - Multilevel residential buildings

Adhesives

- For areas with intermittent water exposure (e.g., bathrooms, Shower rooms, kitchens, sculleries, powder rooms), Uzin KE68T Hybrid Adhesive provides an effective moisture barrier through joints.
- For areas with high heat drop areas (sun) (e.g. in front of windows, ranch sliders, under skylights etc) Uzin KE68T Hybrid Adhesive provides greater heat resistance tolerance up to 50°C
- For all other areas then a high solids acrylic adhesive such as Jacobsen J-11 or Uzin KE66 should be used.
- All adhesives must be installed in accordance with the *Jacobsen J-System Technical Datasheet*.

Expansion gaps and sealants

- All perimeter or transitional expansion gaps must be sealed using low modulus sealant Maxisil N30 or equivalent
- Sealant must be applied as per manufacturer instructions.

Subfloor and levelling compounds

- Subfloor preparation must follow Jacobsen recommendations and guidelines.

6. SUPPORTING DOCUMENTS INCLUDED

The following documents form part of this E3 compliance package:

- Karndean Knight Tile LVT Gluedown flooring Datasheet
- Installation Guide
- Maintenance Guide
- Warranty Information
- NZWTA Test Certificate (ISO 4760)

Further Information

For more information, contact Jacobsen on 0800 800 460, or visit: <https://jacobsen.co.nz/contact/>

	Standard	Result
Size	ISO 24342	See separate table
Thickness	ISO 24346	2.0 mm
Wear layer	ISO 24340	0.3 mm
Surface treatment		K-Guard+ PU coating
Warranty ¹	Commercial	10 years light commercial wear
	Domestic	Lifetime wear
Bevelled edge		No
Standards	EN 649/EN ISO 10582	Pass
	ASTM F1700	Pass
Classification	ISO 10874 - Commercial	31: Commercial moderate
	ISO 10874 - Domestic	23: Domestic heavy
Reaction to fire	AEN/ ISO 9239.1:2010	CRF: 10.3 kW/m ² Smoke value: 151.47% min.
Staining resistance	EN ISO 26987/EN 423	Excellent
	ASTM F925	Pass
Light fastness	ISO 105-B02	Pass (≥ 6)
	ASTM F1515	Pass (< 8)
Abrasion resistance	EN 660-2	Group T
	ISO 10582	Type 1
	ASTM D3884	Pass
Flexibility	ISO 24344	Pass
Dimensional stability	EN 434/ISO 23999	Pass (≤ 0.25%)
	ASTM F2199	Pass
Acoustic impact noise reduction	EN ISO 717-2/EN ISO 140-8	ΔL _w = 1 dB
Electrical behaviour body voltage	EN 1815	Pass
Indentation - residual	EN 433/ISO 24343-1	Pass (≤ 0.1 mm)
	ASTM F1914	Pass (< 8%)
Castor chair continuous use	EN 425/ISO 4918	Pass
Thermal resistance	ISO 8302	0.0100 m ² K/W Suitable for underfloor heating. Max 27°C
Slip resistance ²	AS/NZS 4586:2013	See separate table
Adhesive	General use:	Karndean Mega-Bond
	High temperature:	Karndean 8000 2-part Polyurethane
Environmental	GBCA/NZGBC GreenStar Rating System	GreenTag Level 'A' + LCA Rate 'Silver Streamlined'
	Floorscore SCS-EC10.3-2014 v4.0	Indoor air quality certified; Compliant low emitting VOC emissions.
	Indoor Air Comfort	Gold certification Compliant low emitting VOC emissions.
	Environmental Product Declaration	Product-specific Type III EPD (products with external third-party verification)
	NSF/ANSI 332	Sustainability Assessment for Resilient Floor Coverings; Conformant product
Recycling		Suitable
Phthalate free		Yes

¹ Subject to terms. Please see our website.

² Slip resistance is measured on freestanding ex-factory product. Slip resistance can be affected by many factors, including but not limited to; product installation and underlayment, surface contamination, use, wear and how the product is maintained. Textural variation along the surface of the product can affect nominal values.

For more information:

Australia

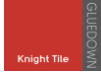
Call: 1800 33 11 70
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Visit: www.karndean.com

New Zealand

Call: 0800 44 21 01
Email: customerservice@karndean.co.nz
Visit: www.karndean.com

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	Product Code	Size		Box Quantity		Slip Resistance
		mm	inches	m ²	Pieces	Oil-Wet Ramp
Wood Designs	KP94-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP95-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP96-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP99-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP104-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP105-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP138-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP141-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP143-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP144-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP146-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP147-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP149-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP150-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
	KP153-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10
KP157-7	1219.2 x 177.8	48" x 7"	4.335	20 Planks	R10	
Stone Designs	ST16	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9
	ST17	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9
	ST19	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9
	ST20	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9
	ST21	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9
	ST22	304.8 x 457.2	12" x 18"	3.345	24 Tiles	R9

Gluedown floors should be installed in accordance with these instructions as well as the applicable national standards and building codes for the installation of resilient flooring at the time of installation, to ensure a quality fit. These floors are not suitable for installation outdoors or in rooms that will be continually wet. They are suitable for use in traditional residential bathrooms, kitchens, laundry / utility rooms.

Failure to observe and follow these installation guidelines and / or current national standards and building codes at time of installation may result in any potential warranty claim being void.

National standards and building codes

Australia and New Zealand: AS / NZS 1884

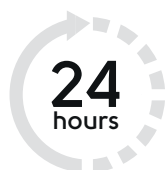
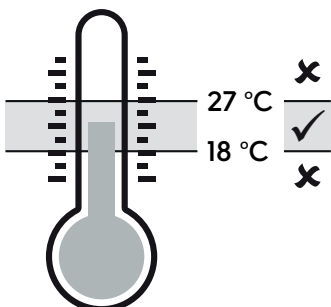
Pre-installation

It is the responsibility of the installer to visually inspect all materials in optimal lighting to confirm it is the correct design, colour, batch, quality, free from defects and quantity as ordered. If the material or batching is incorrect or where defects are apparent, the store of purchase must be contacted before the material is installed. Complaints and claims regarding clearly identifiable defects will not be accepted after installation. Preparation and installation should not begin until all other trades have completed their work.

Acclimatisation of material

Flooring materials should be removed from packaging at least 24 hours prior to installation and allowed to condition in the room where installation is to take place (tiles / planks may be stacked but must be rested flat). HVAC systems, where available, should be in operation during the acclimatisation period (at least 24 hours prior to, during, and 24 hours after installation of floor coverings). Exposure to direct sunlight should be avoided during the acclimatisation and installation process by means of window coverings or temporary measures.

For optimum performance, room temperature should always be maintained between 18-27°C.



Subfloor preparation

Subfloor preparation must comply with applicable national standards and building codes for the installation of resilient flooring at time of installation and in strict accordance with these installation guidelines.

The subfloor must be firm, hard, flat, level, smooth, dry, clean and dust-free and should be prepared dependent on your subfloor type.

See section **Types of subfloor** for specific preparation guidelines.

Moisture in subfloors

Moisture of the base subfloor must be measured according to the relevant local standard. See Table 1 for moisture levels. For any subfloor showing a moisture value above these limits, a suitable damp proof membrane / moisture suppression system must be used.

NOTE: Some national standards require the pH of the concrete slab to be controlled.

Table 1: Moisture in subfloors

AUS / NZS 1884 2021

Concrete Primary test method ASTM F2170 Hygrometer test	Concrete Secondary test method ASTM F1869 Calcium chloride test	Timber and particleboard Test method AS/NZS 1080.1	Plywood Test method AS/NZS 2098.1
NZ 75%RH AUS 80%RH	15g / m ² / 24hrs	10% - 14%	10% - 14%

NZS 1884:1 2013 Below 16%RH

NOTE: RH and Vapour emission rates noted in table 1 are default moisture levels where underlayment or adhesive manufacturers product does not offer a recommended maximum value. The underlayment and / or adhesive manufacturer's installation guides and / or data sheets should be reviewed to confirm specific requirements and acceptable RH and / or Vapour emission rates for the specific product(s) to be used in the complete installation system.

Arranging the planks / tiles

The design on this product is randomly distributed and can be heavier on some tiles / planks than others. To prevent heavy and light colour shading areas, the tiles / planks should be unboxed and shuffled.

Installation procedure

1. Lay the tiles and planks into freshly spread Karndean Megabond hard set adhesive, applied with an unworn V1 1.6 mm x 1.6 mm notched trowel without allowing tack-up to ensure maximum bond strength and minimise the risk of peaking and gapping. Pending site and / or environmental conditions, a two-part chemical cure adhesive or 1-part modified silane heat and moisture resistant adhesive may be required. The use of these adhesives are to be applied with suitable applicator and spread rate as per adhesive manufacturer's instructions.
2. Use a hand roller for each small section immediately as you progress. Wipe excess adhesive off immediately with a damp cloth.
3. The whole area should be rolled in both directions after installation using a 45kg roller or a hand roller in confined areas, paying particular attention to the edges.
4. Ensure all planks and tiles are free from traffic for 24 hours after installation (or protect them from direct contact e.g. cover with board / sheeting).
5. Clean-up surplus adhesive following manufacturer guidelines. For most adhesives, it is recommended that they are removed while still wet, using a damp cloth. Dry adhesive can only be removed using mineral spirits or supplier "Remove".
NOTE: If using a moisture-curing adhesive, use mineral spirits (for tools only), or builders wipes, do not clean with water. Cured adhesive can only be removed mechanically. Follow adhesive instructions for detailed clean up procedure.
6. Maintain climate conditions as per acclimatisation process after installation.

Use of adhesives

NOTE: the company will not be liable for any loss, damage or complaint if the incorrect installation method or adhesive system is adopted for the installation, and / or the adhesive manufacturer's instructions are not strictly followed.

Types of subfloor

NOTE:

- Any primer, levelling compound or other underlayment should be installed in accordance with instructions from that manufacturer.
- No responsibility will be accepted for any subfloor or joint show through to the installed product, either as a "ridge" or a "valley".
- Warning: solvents and other abrasive chemicals used to clean or remove subfloor contaminants can damage the backing and affect the product's performance.

Old adhesive residues

All adhesive residues from previous installations must be mechanically removed. No chemical adhesive removers are allowed on a concrete substrate.

NOTE: Any contaminants left on the surface of the subfloor may adversely affect future adhesion or cause discolouration.

1. Solid subfloors

Concrete

These subfloors should comply with the requirements of the national standards and building codes noted on page 1.

New and old

For all concrete floors, mechanically abrade the floor either via diamond grinding, scarification or light shot blasting to remove contamination (laitance, paint, plaster, adhesive etc). Assess and treat the exposed subfloor. Apply a suitable damp proof membrane (as required), primer and underlayment system in accordance with the product manufacturer(s).

Power floated concrete

After using a water drop test (per ASTM F3191) to determine porosity (beading of water droplets), mechanical abrasive preparation either via diamond grinding, scarification or light shot blasting may be necessary to remove laitance and allow adhesive to disperse into the substrate. Where moisture values exceed the above limits, these surfaces must still be abraded before the application of a suitable damp proof membrane / moisture suppression system. Assess and treat the exposed subfloor, apply a suitable damp proof membrane (as required), primer and underlayment system in accordance with the product manufacturer(s).

Sand cement / 'Anhydrite' (calcium sulphate-gypsum)

Sand cement and anhydrite screeds can be difficult to identify and can be mistaken for more traditional cement-based products.

Sand cement and Anhydrite subfloors are not an acceptable subfloor for this product in Australia or New Zealand. These forms of subfloors do not possess the required tensile and compressive strength for resilient floor covering installation.

Painted floors

Mechanically remove all paint back to the original base. Assess and treat as per the exposed subfloor, apply an appropriate damp proof membrane (as required), in consultation with the underlayment supplier.

2. Wood subfloors

All chipboard / particleboard / MDF / OSB

Overlay with a 5.5 mm flooring grade underlay system (for alternatives see Table 2). Underlay systems must be fixed according to manufacturer's instruction and to national standards to eliminate potential movement later from changing climatic conditions. Alternatively, use an appropriate primer and levelling compound by consulting your underlayment supplier. For areas where frequent spillages are likely, use fibre cement sheets instead installed to manufacturer's guidelines and current building codes.

Flooring grade plywood floor

Plywood joints should be smoothed over using skim coat / patch or using an appropriate primer and levelling compound by consulting your underlayment supplier. For any plywood floors with thickness less than 5.5 mm, treat as chipboard. Test for dampness and vacuum all dust to facilitate bonding.

Standard floorboards / tongue and groove

Floorboards should be well secured, loose boards firmly fastened, and worn / broken boards replaced. Install a minimum 5.5 mm flooring grade underlay system (for alternatives see Table 2), fixed according to manufacturer's instruction and to national standards standards to eliminate potential movement later from changing climatic conditions. Alternatively, use a suitable primer and levelling compound by consulting your underlayment supplier. For areas where frequent spillages are likely, use fibre cement sheets instead installed to manufacturer's guidelines and current building codes.

NOTE: Being extremely porous, fibre cement sheets must first be primed with an appropriate primer and, where required, a smoothing or levelling compound, by consulting your underlayment supplier.

Undulating timber floor

These should first be levelled, by sanding or planing to remove undulations. Then overlay with flooring grade 5.5 mm underlay system (for alternatives see Table 2), fixed according to manufacturer's instruction and to national standards to eliminate potential movement later from changing climatic conditions .

Alternatively, a suitable primer and smoothing compound may be used in consultation with your underlayment supplier.

Wood mosaic panel, woodblock, wood strip, laminate / click products

These floor coverings must be removed together with any underlay and flooring accessories. The subfloor should be treated appropriately.

Table 2: Underlay and underlayment system specification and alternatives

AS/NZS 1884	Standard hardboard underlay of Type GP conforming to AS/NZS 1859.4. High performance medium density fibreboard (HP MDF) conforming to AS/NZS 1859.2. Plywood underlay of Grade C conforming to AS/NZS 2269.0. Fibre-cement sheet underlay conforming to AS/NZS 2908.2. An underlayment specifically designed for timber composite floors.
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NOTE: Underlay and / or underlayment systems MUST be installed according to manufacturer's instruction and to national standards.

3. Other existing subfloors

Asbestos

Some older resilient tiles and adhesives can contain asbestos. Asbestos and asbestos adhesive residue must be mechanically removed by a professional abatement company prior to installing any LVT. In case of doubt contact the relevant authority for advice on removal and disposal.

Metal floor

The metal surface should be cleaned, degreased and then mechanically abraded to remove contamination / rust and provide a surface key. Where this gives a level surface, the floor covering should be adhered with 2-part chemical cure adhesives or 1-part modified silane adhesive as per adhesive manufacturer's instructions; otherwise it must first be primed and levelled with the recommended levelling compound, per underlayment manufacturer's instructions.

Quarry tile / mosaic / terrazzo / porcelain / ceramics

Test floor for evidence of damp. If dampness is detected consult your supplier.

In most cases these substrates will not be sufficient absorbent for the adhesive to disperse into the substrate. These should either be removed, and the subfloor prepared and treated as per the exposed subfloor, or mechanically prepare the surface by thoroughly cleaning, rinsing and abrading the surface, taking extra care to ensure that the surface is firm, dry and free of wax, oil, dust and loose tiles / fragments and that all holes are repaired with a suitable fast-set repair mortar. Apply an appropriate primer and levelling compound by consulting your underlayment supplier, ensuring that all grout lines are filled with no show-through. A second topcoat of primer and levelling compound may be required to smooth over old tile grout lines.

Resilient floor coverings e.g. linoleum, PVC, cork, thermoplastic, carpet

Remove existing floor covering and all traces of adhesive residues. Then assess and treat the exposed subfloor appropriately in consultation with your underlay / underlayment supplier(s).

Miscellaneous floors

Magnesite, Granwood, etc. Consult your supplier.

Extreme temperature fluctuations and high spillage areas

(Sunrooms / conservatories / areas adjacent to panoramic or floor to ceiling glazing / unheated rooms / high spillage wet areas).

In areas likely to be exposed to high surface temperatures, direct sun exposure, high spillage and / or repeated wet conditions the floor must be installed with a suitable 2-part chemical cure adhesive or 1-part modified silane adhesive as per adhesive manufacturer's instruction. It is necessary to keep the temperature in these areas at 18-27°C for 24 hours prior to, during, and 24 hours after installation or as directed as per adhesive manufacturer's instruction. Shade windows prior to, during and after installation as per acclimatisation process.

Underfloor heating

Planks / tiles may be installed over underfloor heating systems, but these must be constructed so that the temperature at the adhesive interface does not exceed 27°C ensuring the correct adhesive is used. The underfloor heating must be commissioned before installation commences. It should then be switched off 48 hours before, during, and 48 hours after installation. The temperature can then be gradually increased to a maximum 27°C at no more than 2°C per day to the desired temperature.

Electrical underfloor heating: please consult manufacturer to ensure their system is compatible with this flooring. Mesh / wire systems must be bedded into a base coat of appropriate primer and levelling compound to cover the wires or mesh by consulting your underlayment supplier.

The room temperature must be between 18°C-27°C prior to and during installation, for both concrete and timber subfloors. For underfloor heating pipes set into concrete, prime the surface before applying a compatible levelling compound as per the manufacturer's instructions.

IMPORTANT: Care must be taken to avoid damage to the floor caused by localised "hot spots / thermal blocks". Consideration must be given in placing rugs, and items of furniture which do not allow hot air circulation. No responsibility for damage to the floor covering can be accepted under these circumstances.

Maintenance

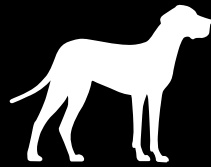
- Use entrance mats to protect against grit and moisture
- Ensure mats and rugs are not rubber-backed (and of a non-staining variety) to prevent any discolouration of the floor.
- Avoid sliding or dragging furniture or other objects across the floor – use floor protector pads to prevent scratching.
- Use large castor cups or other means to protect against indentation from heavy furniture.
- Regularly sweep the floor to remove loose dirt or grit as these can cause fine scratches.
- For a thorough clean, a range of pH-neutral cleaning materials are available. Avoid the use of household cleaners and bleach-based detergents. These could make the floor slippery or cause discolouration.
- Always mop up spills as soon as possible to reduce the risk of slipping and possible staining.
- Do not subject this flooring to standing water. This will present a slip hazard.
- Floor Care Guides are available from the Jacobsen or Karndean website.

For product questions, please contact the flooring dealer where you made your purchase.

Karndean is distributed by Jacobsen in New Zealand. Contact us:

Phone: 0800 800 460

Email: customer.services@jacobsen.co.nz



Karndean
COMMERCIAL

CLEANING, MAINTENANCE AND AFTERCARE GUIDE

Resilient commercial LVT flooring

karndeancommercial.com



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Kardean Commercial floors are very hard wearing and are suitable for a wide range of light to heavy duty commercial applications. This guide will provide your clients with everything they need to know regarding the cleaning, maintenance and aftercare options for their new Kardean commercial

WHY KARNDEAN COMMERCIAL?

Inspired by wood and stone from around the world, our premium resilient LVT is available in hundreds of stylish designs and three installation formats – loose lay, hybrid rigid core and gluedown.

Guaranteed for up to 20 years in commercial settings, the combination of style, durability and performance makes our premium LVT a popular choice in a variety of key sectors, from healthcare, aged care, multi-residential developments, community housing, leisure, new home builds and renovations to education, child care, hospitality and corporate offices.

Along with exceptional customer service and unmatched quality, discover the benefits of specifying Karndean Commercial.



K-Guard+®

We use K-Guard+® surface technology for scuff and stain resistance ensuring there is no need to apply an additional surface treatment following installation.



Realistic designs

Each and every one is original, meticulously crafted by our expert design team to capture the distinctive grains, textures and markings of hand-selected wood and stone.



Durable

Unlike other flooring alternatives, Karndean gives you the look and feel of natural products but with the durability and resilience of luxury vinyl.



Waterproof*

Unlike laminate and engineered hardwoods, our floors are impervious to water and will not swell, crack or warp when wet, making them perfect for kitchens, office tea points and washrooms.



Acoustic qualities

Karndean Designflooring is quieter underfoot compared to most hard flooring alternatives. Our loose lay and rigid core products come with a backing that reduces noise transfer to rooms below, making it ideal for apartment blocks and any upstairs rooms.



Guarantee

All Karndean floors come with a commercial guarantee of up to 20 years, depending on the product range specified.



Hygienic

Our floors don't hold dust, dirt, pollen or other allergens. Our cleaning products also kill 99.9% of germs.



Installation flexibility

Our dual format designs are available in both gluedown and rigid core formats. With the integration of rigid core technology into a selection of designs, specifiers and designers now have the flexibility to use the same design but with a choice of format that's suitable for the project.



Compatible with underfloor heating

For added warmth, our flooring is perfectly suitable for underfloor heating systems up to 27°C.



Low maintenance

The commercial cleaning and maintenance regime is simple and can be carried out by hand or using a mechanical cleaning apparatus. With Karndean, you don't have to worry about any sanding, refinishing, staining or varnishing either.



Enhanced safety

Working in demanding environments that have been assessed as having a very high slip risk can be dangerous without the right safety flooring.

*It is recommended that when selecting flooring products, you verify compliance with building regulations and certification practices relevant to your local area

FLEXIBLE, DURABLE AND HYGIENIC FLOORING SOLUTIONS

Our floor designs offer a hygienic surface with an authentic look of wood and stone yet without any of the practical disadvantages of natural materials. Designed with cutting edge technology, all our flooring products support healthy environments.

Unlike other surfaces such as textile and laminate flooring, Karndean flooring does not trap dust, allergens or micro-organisms and will not warp following splashes and spills. Manufactured with our enhanced K-Guard+® protective surface treatment, a Karndean floor offers a durable and hygienic surface that resists stains and is easy to maintain.

With a simple cleaning regime using either hand or mechanical cleaning apparatus and our specially formulated Karndean Clean, Karndean Commercial flooring is easy to keep clean. A neutral pH floor cleaner is the recommended product to maintain the LVT flooring. By following our guidelines for cleaning after installation and regular ongoing maintenance, a Karndean floor will perform to the highest standards for many years to come.



CLEANING PRODUCTS

Product name and code	Product name and code
	
<p>Floor Care Kit SKU - FCCSM SINGLE</p>	<p>Karndean Remove SKU - FCDGFST2 5 x 2 litres Coverage: 5 x 100m²</p>
	
<p>Karndean Clean SKU - FCDGRCL750 6 x 750ml Coverage: 6 x 150m²</p>	<p>Karndean Commercial Remove SKU - FCDGFST5 5 litres Coverage: 250m²</p>
	
<p>Karndean Clean SKU - FCDGRCL2 5 x 2 litres Coverage: 5 x 500m²</p>	<p>Karndean Refresh SKU - FCRFP750 6 x 750ml Coverage: 6 x 18m²</p>
	
<p>Karndean Commercial Clean SKU - FCDGRCL5 5 litres Coverage: 1250m²</p>	<p>Karndean Refresh SKU - FCRFP2 5 x 2 litres Coverage: 5 x 50m²</p>
	
<p>Karndean Remove SKU - FCDGFST750 6 x 750ml Coverage: 6 x 37m²</p>	<p>Karndean Commercial Refresh SKU - FCRHFP5 5 litres Coverage: 90m²</p>

CLEANING YOUR FLOOR

Karndean Commercial floors are very hard wearing, but as with any flooring they need to be looked after and they can be scratched by grit and other sharp objects. There are many ways to protect your Karndean floor and prevent damage, though. We recommend following our Cleaning & Maintenance instructions and reading our Maintenance Advice for helpful hints and tips on how to look after your floor.

Make sure you use 'Wet Floor' signs to indicate the area being cleaned throughout the cleaning process.

1. Remove loose dust and dirt from the floor using a soft brush or dust mop.
2. Dilute Karndean Routine Cleaner in accordance with the label instructions.
3. Liberally apply the cleaning solution over the entire floor using a clean mop, then soak up the cleaning solution using a damp (not wet) mop and leave to dry.
4. Thoroughly clean the mop with cold running water.

Karndean Routine Cleaner can be used with automatic cleaning appliances (e.g. scrubbing machines), especially for larger areas or for the removal of stubborn dirt.



MAINTAINING YOUR FLOOR

Over time, heavy traffic will wear at the surface of your Karndean floor. To restore your floor, we recommend the use of **Karndean Basic Stripper** and **Karndean Refresh Hard**.

Before applying **Karndean Basic Stripper**

1. Remove all free standing objects from the floor.
2. Vacuum or clean any entrance matting or rugs and set aside.
3. Remove loose dust and dirt from the floor using a soft brush or dust mop.

Applying **Karndean Basic Stripper** using a rotary scrubber

1. Mix **Karndean Basic Stripper** in accordance with the label instructions and pour into rotary scrubber machine.
2. Scrub the floor using the rotary scrubber fitted with a red scrubbing pad. For the edges of the floor and hard to reach areas, use a white scrubbing pad fitted to the end of an applicator.

Applying **Karndean Basic Stripper** using a mop and scrubbing pad

1. Mix **Karndean Basic Stripper** in accordance with the label instructions.
2. Apply cleaning solution to the floor using a mop, working in an area no larger than 5m x 5m at a time.
3. Allow the solution to remain on the floor for approximately 10 minutes, not allowing it to dry.
4. Scrub the floor using a white scrubbing pad fitted to the end of an applicator.

Removal of **Karndean Basic Stripper**

1. Remove all residue with a wet vacuum or mop, and rinse the floor using clean water.
2. After the floor has dried, check all residue has been removed.
3. Equipment should be cleaned in cold running water and stored safely.

Applying **Karndean Refresh Hard**

When using **Karndean Refresh Hard**, avoid, where possible, strong sunlight a draughts and ensure all under floor heating is switched off before starting work.

1. Using a lint free mop, apply undiluted **Karndean Refresh Hard** in a thin even coat using overlapping strokes. Where possible, work parallel to the main light source e.g. window.
2. Allow the floor to dry for approximately 30 minutes.
3. Apply a second coat of **Karndean Refresh Hard**, working in the opposite direction to the first coat.

MAINTENANCE ADVICE

- All hard floors can be slippery when wet. Take extra care when cleaning and ensure the floor area is allowed to dry completely before use. During periods of wet weather, it may be necessary to put down extra matting to prevent water from being brought in from outside.
- Use entrance matting approximately two paces wide to prevent grit and other substances from scratching the floor. Ensure they are cleaned on a regular basis to maintain their effectiveness.
- Mop up spillages straight away to avoid slips and staining.
- Steam mops are not recommended for use on vinyl flooring.
- Avoid using aerosol sprays or silicone-based products, as these can make the floor slippery.
- We recommend using Karndean cleaning products, as other products may contain agents that can damage resilient floor surfaces.
- Sliding or dragging furniture or other objects across the floor can scratch your floor. Use load bearing castors to prevent indentation from heavy furniture or appliances.
- Rubber can permanently stain vinyl floor coverings. Avoid using rubber backed mats, rubber furniture feet or rubber wheeled castors.
- Take care when using vacuum cleaners, as some may not be suitable for working with vinyl floors. Ensure there are no sharp edges or parts where grit can become embedded, as these may scratch the floor.
- If surface scratching does appear, it is important to locate and address the cause of the problem. The appearance of scratching can be improved by following stages 2 and 3 using **Karndean Basic Stripper** and **Karndean Refresh Hard**.
- Accidental damage can occur, and while using **Karndean Basic Stripper** and **Karndean Refresh Hard** may improve the look of the floor, replacing a tile or plank may be preferable.



TROUBLE SHOOTING

Scuff marks

Cause: Friction from foot traffic across the floor surface.

Solution: The floor should be thoroughly cleaned using Karndean Remove, and Karndean Refresh Hard Floor Protector reapplied if appropriate. This process should be repeated every six months, or as the volume of traffic dictates.

Slippery floor

Cause: Greasy residue on the floor/detergent residue/overspray from silicone based products – use of unsuitable or over concentrated maintenance products.

Solution: Remove residue with absorbent paper then thoroughly clean the floor with diluted Karndean Clean, repeat if necessary.

Scratching

Cause: Excessive grit or dirt on the floor.

Solution: Ensure appropriate entrance matting is used. Karndean recommends a depth of at least two paces from the entrance. Sweep the floor frequently and ensure that the floor is dressed with Karndean Refresh Hard Floor Protector to provide additional protection for the floor.

Streaky appearance

Cause: Karndean Remove has not been removed properly/irregular drying of Refresh Hard Floor Protector due to underfloor heating, strong sunlight or draughts.

Solution: If used, remove the Karndean Refresh Hard Floor Protector with Karndean Remove, then thoroughly rinse the floor making sure all remains of Karndean Remove are removed.

Poor appearance

Cause: Incorrect cleaning products

used/Use of dirty maintenance equipment/Karndean Refresh Hard Floor Protector applied to a dirty surface.

Solution: Use only recommended cleaning products. Use Karndean Remove to restore the floor to its original appearance and reapply Karndean Refresh Hard Floor Protector if required.

OUR LOCAL TECHNICAL TEAM ARE HERE TO HELP

Our expert Karndean Technical Team are just an email or a phone call away to provide further expert advice on all our products, cleaning, maintenance and aftercare.

Contact the Team:

Email: technical@karndean.com.au

Phone: 1300 331 170

Karndean Designflooring Warranty

Effective: 8th September 2023

Warranty given by:

Karndean International Pty Ltd
835 Stud Road, Knoxfield, Victoria, Australia 3180 (for Products purchased in Australia)

Karndean International Limited
835 Stud Road, Knoxfield, Victoria, Australia 3180 (for Products purchased in New Zealand)

NEW ZEALAND: 0800 800 460 or customerservices@jacobsen.co.nz

Karndean Product Ranges: Karndean Art Select, Van Gogh, Opus, Knight Tile, LooseLay Longboard, LooseLay Originals and Korlok floor coverings.

Karndean Exclusive Retail Partner Ranges

Definitions

“Australian Consumer Law” means Schedule 2 of the Competition and Consumer Act 2010 (Cth). “Authorised Retailer” has the meaning given in the “Scope” section of this document.

“Commercial” means installation in a premises where business and other non-residential activities are conducted (or have been conducted at any time during the Warranty Period).

“Commercial General Duty” means Commercial use in areas with medium traffic (e.g. classrooms and boutiques) as reasonably determined by the Company.

“Commercial Heavy Duty” means Commercial use in areas with heavy traffic (e.g. corridors, department stores, lobbies, schools, large/open plan offices) as reasonably determined by the Company.

“Commercial Moderate Duty” means Commercial use in areas with low or occasional usage (e.g. hotel bedrooms, conference rooms and small offices) as reasonably determined by the Company.

“Company” means Karndean International Pty Ltd ACN 052 427 853 (for Products purchased in Australia) and Karndean International Limited (613447) (for Products purchased in New Zealand).

“Lifetime” means 35 years.

“Product” has the meaning given in the “Scope” section of this document.

“Residential” means installation in a premises that is a private domestic residence at all times during the Warranty Period (and that is not also Commercial).

“Warranty Period” has the meaning given in the “Scope” section of this document.

“Wear-out” is defined as the wear-down of the surface wear layer to the extent that the pattern is no longer apparent (which occurs when the wear-down exceeds the depth of the “wear layer” for the relevant Product set out in the Appendix).

Scope

The warranties contained within this document automatically apply to all products referred to within the “Product Ranges” above (each a Product), where that Product has been purchased in Australia or New Zealand from a company or person that is authorised by the Company to sell the Product (Authorised Retailer).

Where Products are purchased in Australia, the following paragraph applies:

The warranties within this document are in addition to and do not affect your statutory rights. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

Where Products are purchased in New Zealand, the following paragraph applies:

Subject to paragraph 8 of the “Claims” section in this document, nothing in this document affects or purports to modify or exclude the rights or remedies you may have under the Consumer Guarantees Act 1993 (New Zealand), or any other New Zealand consumer law.

From time to time, the Company may amend this document and the terms of the warranties offered in relation to the Products. If this document is amended, the terms of the warranties that applied at the time that you purchased the Product will continue to apply in relation to that Product.

Subject to the terms of this document, the Company warrants that the Products will not wear out and will be free from manufacturing defects for the applicable period below (Warranty Period) commencing from the date that you purchased the Product (as shown in your original invoice):

Kardean Product Range	Kardean Exclusive Retail Partner Ranges	Applicable Warranty Period	
		Commercial usage	Residential usage
Knight Tile		10-years (limited to Commercial Moderate Duty settings only – no warranty is provided for Commercial Heavy Duty or Commercial General Duty use)	Lifetime
Van Gogh; Opus; LooseLay Longboard; LooseLay Originals	Genero Longboard, Capitol LVP, Burke & Wills, Designer Collection	15-years for Commercial Heavy Duty, Commercial General Duty or Commercial Moderate Duty settings	Lifetime
Korlok	Abode Vibe, Capitol rigid core	15-years for Commercial Heavy Duty, Commercial General Duty or Commercial Moderate Duty settings	Lifetime
Art Select		20-years for Commercial Heavy Duty, Commercial General Duty or Commercial Moderate Duty settings	Lifetime

If the Company supplies a repaired or replacement Product in response to a warranty claim, then the relevant Warranty Period for that Product will not restart and will remain as starting on the date on which you purchased the original Product (i.e. before that repair or replacement).

Your Obligations

As flooring is not a branded product, it is important to retain proof of purchase to establish that the flooring is a "Product" for the purpose of this document and to evidence the original installation site.

Please keep proof of purchase in the form of a receipt, bill, invoice or statement from the Authorised Retailer, showing the price you paid and the date of its purchase, together with proof of the installation address and date.

Make sure you also know which Product you have purchased and the warranty applicable to the floor (details are on the back of sample swatches, in product brochures and available throughout karndean.com, at the time of purchase).

Have your floor installed by a professional installer in accordance with the relevant Karndean Designflooring Installation Guidelines published by the Company (available at karndean.com) and maintain and protect your floor as set out in the After Care Guide published by the Company. Installation errors are not manufacturing-related conditions. The Company does not warrant installer workmanship.

Conditions

To the maximum extent permitted by law, the Company will only honour the warranties within this document where (in the Company's reasonable opinion) the following conditions have all been met:

1. The Product has been installed in accordance with "AS/NZS Standard 1884 Floor coverings – Resilient sheet & tile – Installation practices" and in accordance with the Company's instructions (including the relevant Karndean Designflooring Installation Guidelines published by the Company (available at karndean.com), both current at the time of installation.
2. Where the Product is installed in an area with direct and/or unfiltered sunlight (including but not limited to areas with panoramic or north facing windows or windows with no external eaves) and a claim under these warranties relates to fading or discolouration of the Products, the relevant windows must have at all times had appropriate (including but not limited to) window tinting (with UV inhibitors), curtains, blinds, awnings or external eaves shading that part of the Product.
3. The Product used has been correctly specified for use in the type of room or rooms in which it was installed.
4. The Product has been maintained in accordance with the Company's cleaning and maintenance instructions (including the After Care Guide published by the Company), and suitable barrier matting has been provided to all external entrances to prevent the ingress of abrasive materials, including grit.
5. Protection (e.g. felt pads or castor cups) has been fixed to the feet of the furniture to prevent damage.
6. The Product has been subjected to normal wear and tear (only).
7. For Products with a click mechanism, the minimum recommended expansion gap must have been allowed around all fixed items, including walls and pipework. These Products must also be fully floated, i.e. no items/fixtures/fittings should be permanently fixed either to or through the flooring. Under no circumstances should underlayment be permanently bonded to the subfloor. (Refer to the Company's Installation Guidelines.)
8. For Products with a locking mechanism, they must not have been used with heavy-duty wheeled equipment at any time.

HoldSafe® Warranty

The Korlok and Van Gogh product ranges are supplied with a 5G® Locking Mechanism backed by our HoldSafe® lifetime warranty. 5G® is a patented technology invented by Välinge Innovation AB. The 5G® word mark and logo are registered trademarks owned by Välinge Innovation AB.

The Company provides a separate Warranty Period in relation to the HoldSafe® 5G Locking Mechanism. The Company warrants that no joint failure will occur for a period of 15 years in Commercial settings or during the Lifetime of the Product (35 years) in Residential applications, provided that the 5G Locking Mechanism and the associated flooring is installed in accordance with the Karndean Designflooring Installation Guidelines, and used as intended and recommended in the relevant product specifications supplied by the Company.

“Joint failure” is defined as a complete loss of connection between the HoldSafe 5G connections on the Korlok and Van Gogh material.

In the event that joint failure occurs within the relevant Warranty Period, the Company will repair or provide replacement materials only. The Company accepts no responsibility for faulty installation or incorrect maintenance and will not provide any compensation for the labour required to uplift and reinstall the relevant flooring.

Exclusions

To the maximum extent permitted by law, the Company will not be liable for (and no warranty claim can be made under this document for) any loss or damage to a Product resulting from any of the following:

1. Any immediately obvious manufacturing defects that were not notified to the Company prior to installation.
2. Any and all defects, damage or discolouration to a Product caused by improper installation and in accordance with the current “AS/NZS Standard 1884 Floor coverings – Resilient sheet & tile” and in accordance with the Company’s current Installation Guidelines. Includes any problems caused by the use of non-recommended adhesive or sealer, underlayment and/or preparation of the substrate. Installation errors are not manufacturing-related conditions. The Company does not warrant installer workmanship.
3. Any willful or accidental damage (e.g. damage caused by fire, flood, impacts, objects being dropped or dragged across the floor or improper shipping, handling or storage etc.).
4. Reduction in a Product colouration, surface gloss and texture due to normal wear and tear and Improper maintenance, which results in loss of gloss or build-up of a dulling film. This includes damage caused by steam mops.
5. Any and all damage, alterations or discolouration to a Product caused by excessive heat, stains, scratches, scuffs, and/or from neglect or misuse of strong detergents and chemicals (e.g. including but not limited to stains from paints, dyes, mats, or other similar materials).
6. Any and all damage or discolouration to a Product caused by indentation, abrasion, mechanical stress, tears, pet- related incidents, furniture depressions, or caused by the use of rubber or latex e.g.: includes situations such as unprotected caster wheels, furniture legs, stiletto heels, or potential gouging from heavy sharp objects.
7. Any and all damage to a Product caused by localised ‘hot spots/thermal blocks’ when underfloor heating has been installed. Examples include damage caused by rubber-backed rugs or other items that do not allow heat to circulate freely.
8. Any and all damage or discolouration to a Product caused by remodel or construction-related activities and/or modifications, alterations or repairs.
9. Any and all damage, discolouration or fading to a Product caused by external factors, including but not limited to exposure to the sun (where appropriate window tinting, curtains, blinds, awnings or external eaves have not been used at all relevant times), mats, excessive temperature, water (including water leakage and subfloor water) heat and hydrostatic pressure.
10. For Products with a click mechanism (including the HoldSafe® 5G Locking Mechanism), damage to the click mechanism or associated damage to the Product when used in wet areas such as bathrooms, laundries, etc that have a floor waste. NB: These Products may be used in bathrooms where a separate shower base is fitted and where there is no floor waste or associated falls in the installed area.

Important information

This warranty does not guarantee the Products to be fit for a particular purpose or use. The Products have differing levels of durability in different areas (such as areas with high UV exposure, with high levels of foot traffic or where rolling loads are expected). It is your responsibility to ensure that the Product is suitable for its intended use (or you should ask your Authorised Retailer or installer to make this assessment if you have any doubt).

You must inspect the Product prior to installation for any imperfections or manufacturing-related defects. It is the responsibility of the installer/end user to confirm that the received Products are free of any obvious visible conditions that may be detrimental to the appearance and/or performance of the Product. Minor colour, shade and/or texture variations are normal. Any variances between actual material, product samples and/or brochures should be addressed with the Company or the Authorised Retailer prior to installation.

For Residential customers only, this warranty is transferable. Should the purchaser move house, the warranty will remain with the floor purchased. i.e. the warranty belongs to the property, not the purchaser. If the warranty is transferred, the residual duration of the Warranty Period will transfer to the new owner and will be recognised by the Company, provided that the new owner can provide the Company with the original invoice for the Product. It is the responsibility of the original purchaser to supply any new owner with the required proof of purchase documents.

No warranty is transferred if a Product is removed from the premises on which it was originally installed and then reinstalled at another location.

Making a Claim

1. If you wish to make a warranty or other claim against the Company in relation to a Product under this document and/or any applicable law (Warranty Claim), the Warranty Claim must initially be submitted to the Authorised Retailer from which you purchased the Product. The Authorised Retailer will liaise with the Company on your behalf. If the Authorised Retailer is no longer in business (or you are not satisfied with the Authorised Retailer's handling of the matter), then you should make your claim by contacting the Company directly using the email address on the first page of this document.
2. To make a Warranty Claim, the relevant defect or damage in relation to the Product (or component of the Product) must have appeared before the end of the relevant Warranty Period, and before the end of that Warranty Period you must have notified the Company or the relevant Authorised Retailer (in each case, in writing) of your intention to make a Warranty Claim.
3. The Company will require information regarding the Warranty Claim, including a copy of the invoice, Product details, installation/subfloor information, photographs and a report of the defect. You must not remove the damaged or defective Product from the installation without prior agreement from the Company.
4. The Company may choose to remove a nominal number of Product samples from the installation site for technical review and/or assessment. In the event samples are required to be removed for such activity, the company will supply materials of replacement of equal value to the nearest specification and/or colour. Samples removed from the site will not be returned to the installation site.
5. Once the Warranty Claim is raised, the Company may choose to inspect the installation. If the Product is found to be faulty, the Company will replace any defective material at no charge with the same Product or a similar product (subject to availability).
6. The Company may reimburse a proportion of the labour costs required to uplift the faulty Product that is the subject of the Warranty Claim and reinstall the replacement Product. All costs must be agreed with the Company before work commences. Any agreed cost of labour to rectify any agreed Product fault will be limited depending upon the time elapsed since installation (calculated on a pro-rata basis according to the scales set out in the Appendix to this document), and you will be responsible for paying the difference. Note that no labour costs will be reimbursed if the Warranty Claim relates to a joint failure under the HoldSafe® warranty.
7. If it is found to be necessary to replace a Product that is no longer available, the Company reserves the right to replace it with a product of approximately equal value and reasonably comparable specifications.
8. To the maximum extent permitted by law, the Company accepts no liability for any loss or damage arising from loss of use, loss of profits or revenue, or for any resulting indirect or consequential loss or damage (irrespective of whether the loss or damage is caused by or relates to breach of contract, statute, tort (including negligence) or otherwise, and irrespective of whether the Company or any other person was previously notified of the possibility of the loss or damage).

9. To the maximum extent permitted by law, any warranty, guarantee, condition, representation, undertaking or other right that would be guaranteed or implied in this document or is otherwise imposed by statute, common law, equity, trade, custom or usage, and which is not expressly included in this document, is excluded. Where you are in trade and the Products purchased in New Zealand are supplied and acquired in trade, you agree to contract out of the provisions of the Consumer Guarantees Act 1993 (New Zealand) to the extent permitted by that Act, and that it is fair and reasonable to do so.
10. You will not be entitled to claim any costs or expenses from the Company in relation to making a Warranty Claim, including any costs that you incur in delivering the Product to (or collecting the Product from) an Authorised Retailer.
11. The Company will only recognise Warranty Claims where the Product has been purchased directly from the Company or an Authorised Retailer. Please see the Company website for details.

RESIDENTIAL			
Labour compensation	Prorated	Prorated	Prorated
Product Range	Art Select	LooseLay Longboard, LooseLay Originals, Korlok, Van Gogh, Opus	Knight Tile
Wear Layer	0.7mm	0.5mm	0.3mm
Warranty Period	Lifetime	Lifetime	Lifetime
Years 0-2	100%	100%	100%
Years 2-5	75%	75%	50%
Years 6-12	50%	50%	20%
Years 12-15	35%	25%	10%
Years 15-20	20%	15%	5%
Years 20-35	10%	7%	0%
COMMERCIAL			
Labour compensation	Prorated	Prorated	Prorated
Product Range	Art Select	LooseLay Longboard, LooseLay Originals, Korlok, Van Gogh, Opus	Knight Tile
Wear Layer	0.7mm	0.5mm	0.3mm
Warranty Period	20 years	15 years	10 years*
Usage	Commercial Heavy Duty, Commercial General Duty or Commercial Moderate Duty settings	Commercial Heavy Duty, Commercial General Duty or Commercial Moderate Duty settings	Limited to Commercial Moderate Duty settings only – no warranty is provided for Commercial Heavy Duty or Commercial General Duty use)
Years 0-2	100%	100%	100%
Years 2-5	65%	50%	30%
Years 6-10*	as below	as below	10%
Years 6-12	40%	25%	n/a
Years 12-15	20%	10%	0%
Years 15-20	10%	0%	0%

*For Karndean Exclusive Retail Partner Ranges please refer to the table on page 2.

CLIENT:
Jacobsen Creative Surfaces Ltd.
PO Box 28 042
Remuera, Auckland

Attn.: Brian Davis

SAMPLE RECEIVED FROM:
Jacobsen Creative Surfaces Ltd.

Date Received: 17.7.25

SAMPLE DESCRIPTION:
Kardean – LVT Knight Tile range, thickness 2mm
flooring planks assembly fixed to a clear Perspex base
using UZIN KE 68T, 1-component STP Hybrid
adhesive.

Client Order No.:

Client Reference:

1 of 4

RESILIENT FLOOR COVERINGS (BASED ON ISO 4760:2022(E) - LAMINATE FLOORING – TOPICAL MOISTURE RESISTANCE – ASSEMBLED JOINT (MODIFIED))

Method

This test method has been modified to suit Luxury vinyl tile flooring that is square butt joined without a joining mechanism. The modification involves adhesive fixing the tiles with 100 percent bond coverage then applying the same test method over the "T joint" to determine if coloured dye will penetrate through the substrate.

The samples are adhered to a clear Perspex sheet using a single component urethane type adhesive that allows the underside of the sample to be inspected to enable detection of any dye penetration through the joints.

The testing was performed in triplicate.

Weights were not used on these samples.

100 mls 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 underside of the sample was inspected through the clear Perspex to enable detection of any dye penetration through the sample.

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).

Date Tested: 21/7/2025

Note: Samples were assembled /adhesive fixed to Perspex by the client.

Results:

Quantitative Results:	Wet Swell (mm)			Recovered Swell (mm)		
	Specimen 1	Specimen 2	Specimen 3	Specimen 1	Specimen 2	Specimen 3
Final Average Results (Positions 2 to 4)	0.00	0.02	0.01	0.00	0.01	0.00
Final Results (Position 1)	0.03	0.00	0.03	0.00	0.00	0.03

	Wet Swell			Recovered Swell		
	Specimen 1	Specimen 2	Specimen 3	Specimen 1	Specimen 2	Specimen 3
Qualitative Ratings (individual results):	1	1	1	1	1	1

"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.


C Judan
Key Technical Person

24/07/2025

CLIENT:
Jacobsen Creative Surfaces Ltd.
PO Box 28 042
Remuera, Auckland

SAMPLE RECEIVED FROM:
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Date Received: 17.7.25

Attn.: Brian Davis

SAMPLE DESCRIPTION:
Karndeau – LVT Knight Tile range, thickness 2mm
flooring planks assembly fixed to a clear Perspex base
using UZIN KE 68T, 1-component STP Hybrid
adhesive.

Client Order No.:

Client Reference:

2 of 4

Qualitative Grade:

- 1 = No change - Little to no noticeable change in edge swell or panel surface lift
- 2 = Slight swelling - Slight swelling, small ridge along one or more joints, very little if any panel surface lift
- 3 = Moderate - Noticeable edge swelling and some panel surface lift extending away from joint
- 4 = Objectional - Severely raise edge and swelling extending noticeably under the panel surface
- 5 = Failed test - Water leaked out of the ring, leaving no continuous film of water inside the ring
(this grade is given even if there is no swell of the edge joint)

Observations:	Specimen 1	Specimen 2	Specimen 3
Migration of water along the upper surface:	No	No	No
Migration of water to the underside:	No	No	No

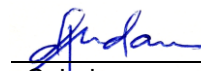
Disassembly Observations:	Specimen 1	Specimen 2	Specimen 3
Migration of water along the upper surface:	No	No	No
Migration of water to the underside:	No	No	No

Note: 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.

This ISO test method 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 edge sealant has been applied.

"THIS REPORT APPLIES ONLY TO THE SAMPLES TESTED"

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3 of 4



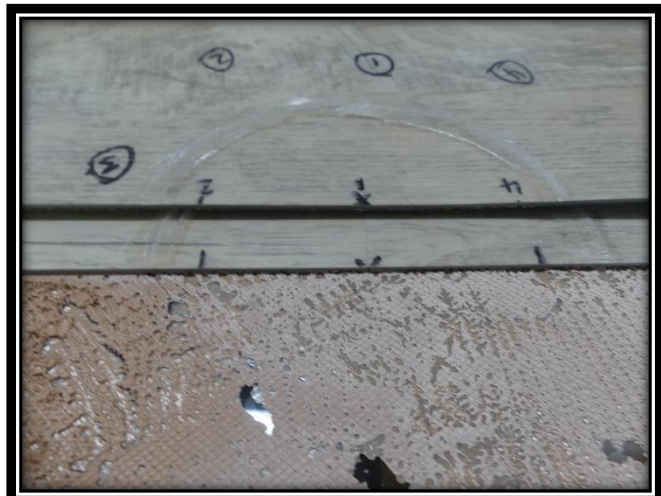
24 Hrs with Water



Wet Swell



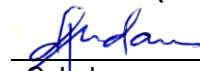
Recovered Swell



Recovered Swell (Disassembled)

"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.


C Judan
Key Technical Person

24/07/2025



All tests reported herein
have been performed in
accordance with the
laboratory's scope of
accreditation

No. 1576121.6

(Please quote this number in all correspondence)

CLIENT:
Jacobsen Creative Surfaces Ltd.
PO Box 28 042
Remuera, Auckland

Attn.: Brian Davis

SAMPLE RECEIVED FROM:
Jacobsen Creative Surfaces Ltd.

Date Received: 17.7.25

SAMPLE DESCRIPTION:
Kardean – LVT Knight Tile range, thickness 2mm
flooring planks assembly fixed to a clear Perspex base
using UZIN KE 68T, 1-component STP Hybrid
adhesive.

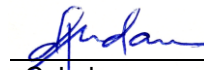
Client Order No.:

Client Reference:

4 of 4



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24/07/2025



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