Insulation

Kooltherm® K3 Floorboard

Insulation for Floors

- Rigid thermoset phenolic insulation
- Fibre-free, closed cell insulation core
- Resistant to the passage of water vapour
- Easy to handle and install
- Ideal for new build and refurbishment
- Manufactured with a blowing agent that has zero ODP and low GWP
- NCC and AS/NZS 4859.1:2018 compliant
- Made in Australia

Fibre-free Core

AUSTRALIAN MADE

Kingspan®

Typical Construction and Product R-values

Solid Residential Concrete Slab on Ground Floor - Insulation below the Floor Slab

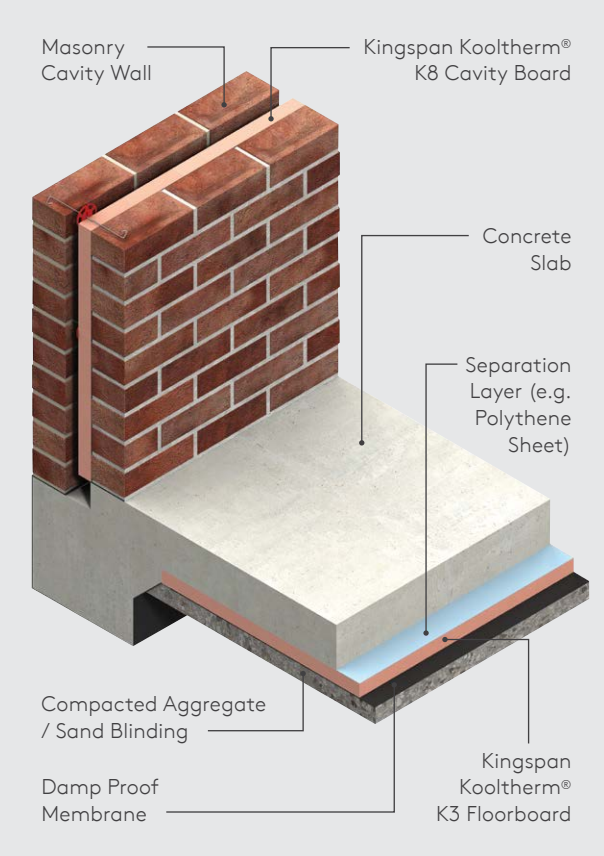

Figure 1. Solid residential concrete slab on ground floor with Kooltherm® K3 Floorboard below the floor slab.

Residential Concrete Slab and Hydronic Underfoor Heating on Ground Floor - Insulation above the Floor Slab

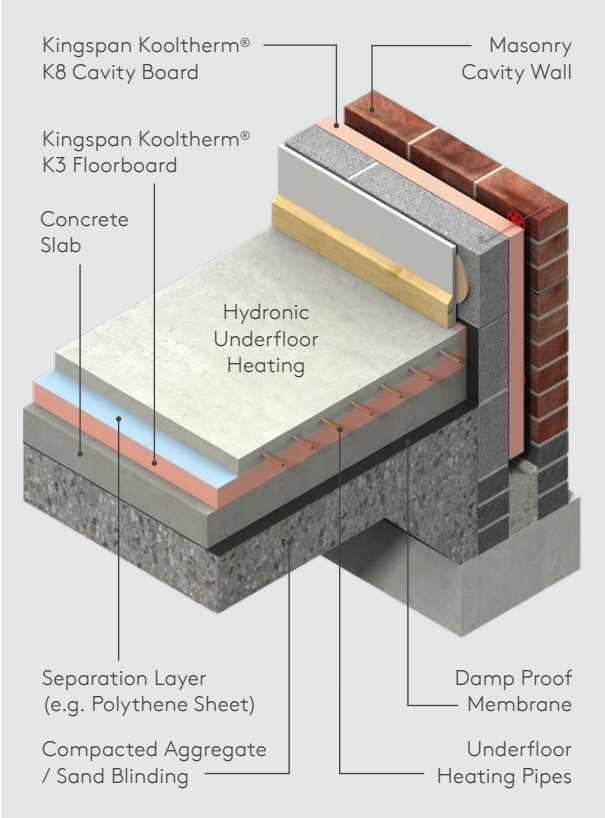

Figure 2. Residential concrete slab with hydronic underfloor heating on ground floor with Kooltherm® K3 Floorboard over the floor slab.

Thermal Performance

Nominal Product Thickness	Declared Product R-value at 23°C
25 mm	R1.10
50 mm	R2.30

The R-values shown are Product R-values.

Kingspan Kooltherm® products are manufactured, tested and packaged in conformance with AS/NZS 4859.1:2018.

Total R-values can be determined in accordance with Specification 39 of NCC 2022 or Section 3.5 of CIBSE Guide A for soil or sub-floor spaces.

Please contact Kingspan Insulation Technical Services on 1300 247 235 or email technical@kingspaninsulation.com.au for further guidance.

Product Details

Product Description

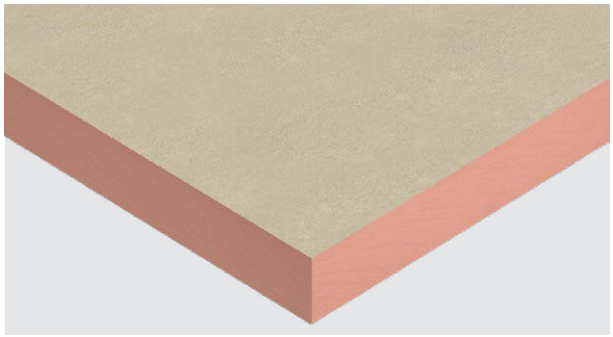

Figure 3. Kingspan Kooltherm® K3 Floorboard.

Kingspan Kooltherm® K3 Floorboard is a fibre-free rigid thermoset closed cell phenolic insulation core, sandwiched between two layers of tissue based facing autohesively bonded to the insulation core during manufacture.

Kingspan Kooltherm® K3 Floorboard is manufactured with a blowing agent with zero ODP and low GWP.

Product Data	
Declared Thermal Conductivity (λ-value) AS/NZS 4859.1:2018 / ASTM C518-2017	0.022 W/m.K at 23°C (Insulant Thickness ≥ 45 mm)
	0.023 W/m.K at 23°C (Insulant Thickness 25 - 44 mm)
Product Dimensions	2400 mm x 1200 mm (2.88 m²)
Nominal Product Thickness	25, 50 mm

Product R-value

Nominal Product Thickness	Declared Product R-value at 23°C
25 mm	R1.10
50 mm	R2.30

Specification Guide

Kingspan Kooltherm® K3 Floorboard

The floor insulation shall be Kingspan Kooltherm® K3 Floorboard ___ mm thick, with a tested smoke obscuration of not more than 100 m²/kg, comprising a rigid thermoset phenolic insulation core with a tissue based facing on both sides, manufactured under a management system certified to ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and ISO 50001:2018 by Kingspan Insulation Pty Ltd and shall be installed in accordance with the instructions issued by them.

A Project Specific Warranty provided by Kingspan Insulation must be submitted.

Compressive Loads

Un–reinforced floor screeds can be used in conjunction with Kingspan Kooltherm® K3 Floorboard in most applications. However, where floor loads are to be excessive, please contact our Technical Services Department on 1300 247 235 or email technical@kingspaninsulation.com.au.

Substrate

Kingspan Kooltherm® K3 Floorboard is not recommended for use in direct contact with subsoil and must be used over a DPM. Where vertical slab edge insulation is required, the DPM should always be placed on the external face of the Kingspan Kooltherm® K3 Floorboard.

Wheeled / Foot Traffic

Ensure boards are protected during installation from wheeled / foot traffic by using scaffold planks or other protective measures.

Product Details

Standards and Approvals

Kingspan Kooltherm® K3 Floorboard is manufactured to the highest standards and certified under the following management systems:

Standard	Management System
ISO 9001:2015	Quality Management
ISO 14001:2015	Environmental Management
ISO 45001:2018	Occupational Health and Safety
ISO 50001:2018	Energy Management

Product Testing

Characteristic	Standard	Result
Compressive Stress (Insulant)	AS 2498.3:1993	Typically exceeds 120 kPa at 10% compression
Water Vapour Transmission	ASTM E96 Part B - 2016	> 35 MN.s/g

Fire Performance

Test	Test Method	Result
Early Fire Hazard Properties. (Ignitability, Flame spread, Heat release, Smoke release)	AS 1530.3:1999	Spread of Flame Index: 0 Smoke Development ≤ 3

Durability

If correctly applied, Kingspan Kooltherm® products can be expected to have a long life of service.

Their durability depends on the supporting structure and the conditions of its use.

Kingspan Kooltherm® products are warranted for a period of 10 years for both residential and commercial installations.*

* Subject to the terms of the complete Kingspan Kooltherm® warranty document which is available upon request or downloadable from www.kingspaninsulation.com.au

Environmental Data

Aspect	Characteristic
Re-usability	Re-usable if removed with care (long term of service expected)
Water Use	No water used in Kingspan Insulation's manufacturing process
Blowing Agent	Manufactured with a blowing agent that has zero ODP and low GWP

Installation Instructions

1. The site should be prepared and foundations, where appropriate, built to damp proof course (DPC) level.
2. A thin sand blinding may be used to achieve a continuous level surface free from projections over rolled aggregate.
3. The damp proof membrane (minimum 300 micron / 1200 gauge polythene) should be laid with joints well lapped and folded, to prevent the passage of ground water, over well compacted aggregate, prior to laying Kingspan Kooltherm® K3 Floorboard.
4. The membrane should be brought up the surrounding foundation walls/slab until it is sufficiently above the height of the wall DPC so that it will connect with or form the DPC.
5. Kingspan Kooltherm® K3 Floorboard should not be placed under any direct point loads or foundations including slab thickening.
6. The insulation boards should always be loose–laid break–bonded, with joints lightly butted.
7. If two layers of Kingspan Kooltherm® K3 Floorboard are required, they should be horizontally offset relative to each other so that, as far as possible, the board joints in the two adjacent layers do not coincide with each other.
8. Insulation boards should be overlaid with a polythene sheet (not less than 125 micron / 500 gauge) as best practice, to prevent the wet concrete penetrating the joints between the boards, and to act as a vapour control layer. Ensure the polythene sheet has 150 mm overlaps, taped at the joints.
9. The subsequent installation of the concrete slab and screed or other flooring material is carried out in a manner similar to that for an un–insulated floor. The concrete slab and screed should be allowed to dry out prior to the installation of the floor finish.

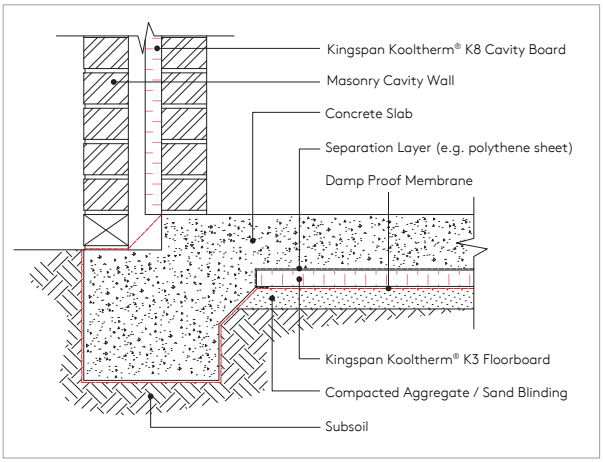

Figure 4. Side elevation - Cavity Wall on Ground Floor Slab with Kingspan Kooltherm® K3 Floorboard

Other Information

General

Cutting

Cutting should be carried out either by using a fine toothed saw, or by scoring with a sharp knife, snapping the board over a straight edge and then cutting the facing on the other side. Ensure accurate trimming to achieve close-butting joints and continuity of insulation.

Packaging

According to quantity, the boards are supplied in packs, labelled and shrink-wrapped in polythene.

Handling and Storage

Storage

The packaging of Kingspan Kooltherm® should not be considered adequate for long term outdoor protection. Ideally boards should be stored inside a building. If, however, outdoor storage cannot be avoided then the boards should be stacked clear of the ground and covered with an opaque polythene sheet or weatherproof tarpaulin. Boards that have been allowed to get wet should not be used.

Resistance to Solvents

The insulation core is resistant to short–term contact with petrol and with most dilute acids, alkalis and mineral oils. However, it is recommended that any spills be cleaned off fully before the boards are installed. Ensure that safe methods of cleaning are used, as recommended by suppliers of the spilt liquid. The insulation core is not resistant to some solvent-based adhesive systems, particularly those containing methyl ethyl ketone. Adhesives containing such solvents should not be used in association with this product. Damaged boards or boards that have been in contact with harsh solvents or acids should not be used.

Safety Information

Kingspan Insulation products are chemically inert and safe to use. A Product Safety Information sheet is available from Kingspan Insulation Pty Ltd.

Installation must be in accordance with AS 3999:2015 Bulk Thermal Insulation Installation and AS 3000:2018 Electrical Installations (Wiring Rules).

Contact Details

Australia

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