

Product Data Sheet

Kooltherm® K20 Concrete Sandwich Board

Insulation for concrete sandwich wall systems



Kooltherm®

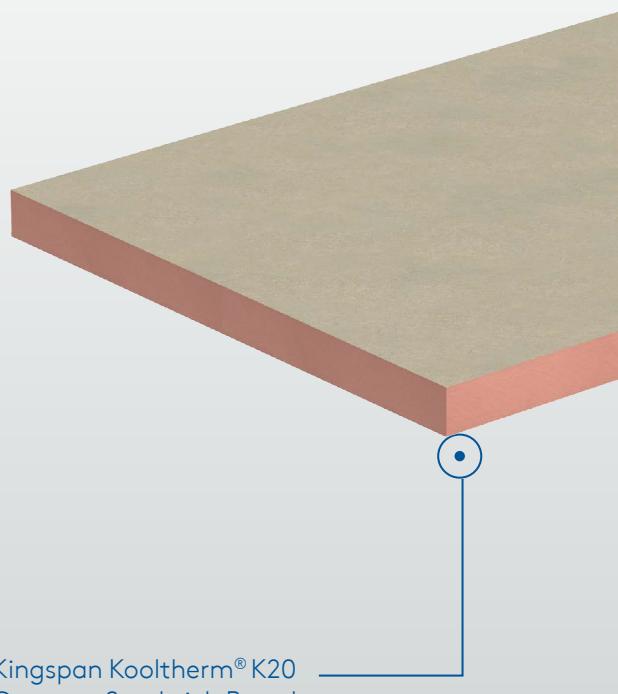
 **Kingspan®**

Kooltherm® K20 Concrete Sandwich Board Product Description



Kingspan Kooltherm K20 Concrete Sandwich Board is an insulation product, with a glass tissue based facing, autohesively bonded onto the insulation core. The product is used for concrete insulated sandwich wall panels.

Kooltherm K20 Concrete Sandwich Board is manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).



- Rigid thermoset phenolic insulation
- Fibre-free, closed cell insulation core
- Manufactured with a blowing agent that has zero ODP and low GWP
- Easy to handle and install
- Ideal for new build
- No CFC or HCFC used in manufacture
- NZBC and AS/NZS 4859.1:2018 compliant

Figure 1. Insulated Sandwich Panel

Fibre-free
Core

Kooltherm® K20 Concrete Sandwich Board

Product Performance Data

Product Data	
Thermal Conductivity (λ -value) at 15°C as per AS/NZS 4859.1:2018	0.022 W/mK (Insulant Thickness \geq 45 mm) 0.023 W/mK (Insulant Thickness 25 - 44 mm)
Product Dimensions	2400mm x 1200mm (2.88m ²)
Product Thickness	25-100mm (Custom lengths and widths available upon enquiry. Minimum order quantities apply)

Product R-value

Product Thickness	Product R-value
25 mm	R1.10
30 mm	R1.30
40 mm	R1.75
50 mm	R2.35
60 mm	R2.80
70 mm	R3.30
80 mm	R3.75
90 mm	R4.20
100 mm	R4.70

Declared Product R-value at 15°C as per AS/NZS 4859.1:2018.

Scope of Use

Kooltherm K20 Concrete Sandwich Board is a fibre-free rigid thermoset phenolic insulation core, sandwiched between two layers of tissue based facing autohesively bonded to the insulation core during manufacture.

- Suitable for use for concrete insulated sandwich wall systems. Ideal for new build.
- Suitable for transforming and upgrading the appearance of existing buildings - ideal for new build.

General

- NZBC and AS/NZS 4859.1:2018 compliant
- Kooltherm K20 Concrete Sandwich Board is not subject to a warning or ban under section 26 of the Building Act 2004 when used as per the product scope
- Fibre-free, closed cell insulation core
- Ideal for new build.
- Rodent, mould and fungi resistant
- Product made in Australia.

Specification Guide

Kooltherm K20 Concrete Sandwich Board The external wall insulation shall be Kingspan Kooltherm K20 Concrete Sandwich Board [__] mm thick 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 Kingspan instructions.

Limitations

- Cannot be permanently exposed to weather elements.
- Not a component for structural bracing.

Compliance

Kooltherm K20 Concrete Sandwich Board meets the performance requirements of NZBC Clause B1 Structure (B1.3.1, B1.3.2, B1.3.3(a), B1.3.4), Clauses B2 Durability (B2.3.1 (a) 50 years, Clause E3 Internal Moisture (contributes to E3.3.1), Clause F2 Hazardous Building Materials (F2.3.1), and Clause H1 Energy Efficiency (contributes to H1.3.1 and H1.3.2E) by testing and comparison with acceptable solutions H1/AS1 and H1/AS2 and verification methods H1/VM1 and H1/VM2 providing:

- It is not damaged, dented or fractured.
- It is installed in accordance with installation instructions.
- It is installed by or under guidance of Licensed Building Practitioners or follow concrete sandwich panel manufacturer's installation instruction.

Standards and Approvals

Kooltherm K20 Concrete Sandwich Board 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	Health and Safety Management
ISO 50001:2018	Energy Management

Product Testing

Characteristic	Standard	Result
Compressive Stress (Insulant)	AS 2498.3:1993	\geq 100kPa at 10% compression

Kooltherm® K20 Concrete Sandwich Board

Product Performance Data

Fire Performance

Test	Test Method	Result
Ignitability, Flame spread Heat release, Smoke release	AS 1530.3:1999	Spread of Flame Index: 0 Smoke Development ≤ 3
Flame Propagation (AS 1366.2:1992)	AS 2122.1:1993	Complies

Durability

If correctly installed, Kingspan Kooltherm products can be expected to have a long life of service. Their durability depends on the supporting structure and the conditions of 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.co.nz

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
CFC/HCFC	Product CFC/HCFC Free



Product Warranty

Standard Kingspan Insulation Warranty applies. Refer to Kingspan Insulation Warranty statement for further details. This is available online at kingspaninsulation.co.nz; or call us on 0800 806 595; or email info@kingspaninsulation.co.nz

Kingspan Insulation NZ Limited (NZBN 9429045930393), reserves the right to amend product specifications without prior notice. The information contained in Kingspan's literature is given in good faith and based on good building practice but are not an exhaustive statement of all relevant information and are subject to any conditions contained in the Warranty. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. All product dimensions and performance claims are subject to any variation caused by normal manufacturing process and tolerances.

Furthermore, as the successful performance of the relevant system depends on numerous factors outside the control of Kingspan (for example quality of workmanship and design), Kingspan shall not be liable for the recommendations in that literature and the performance of the Product. For other applications or conditions of use, Kingspan Insulation offers a Technical Advisory Service, the advice of which should be sought for uses of Kingspan Insulation products that are not specifically described herein. Please check that your copy of the literature is current by contacting us or visiting www.kingspaninsulation.co.nz E&OE



Kooltherm® K20 Concrete Sandwich Board Installation Instructions

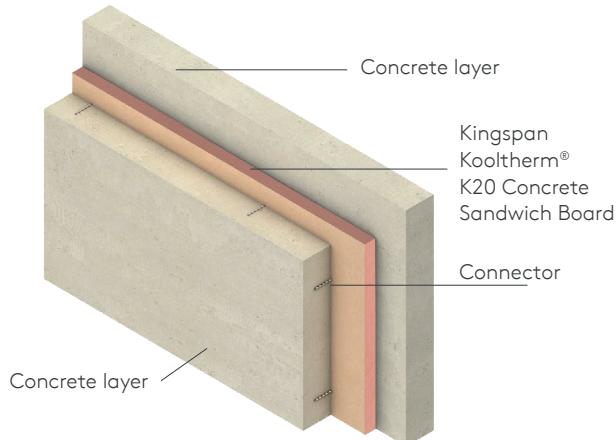


Figure 2. Kooltherm® K20 Concrete Sandwich Board Installation

Follow concrete panel manufacturer's proprietary installation method

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.

Daily Working Practice

At the completion of each day's work, or whenever work is interrupted for extended periods of time, board edges and joints should be protected from inclement weather

Handling and Storage

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



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