

Insulation
New Zealand

Product Data Sheet

Kooltherm[®] K10 G2 Soffit Board

Soffit Insulation



Kooltherm[®]


Kingspan[®]

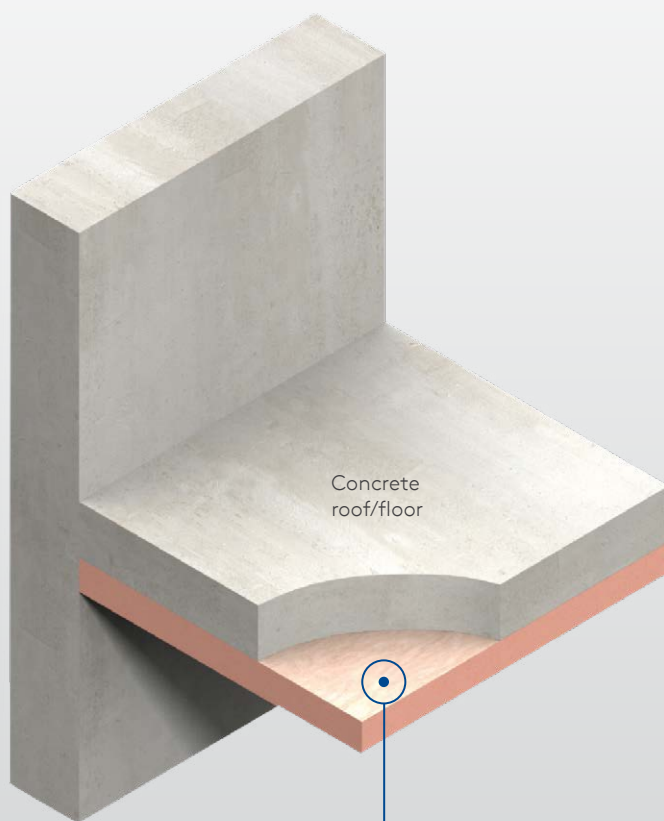
Kooltherm® K10 G2 Soffit Board

Product Description

Kooltherm®

Kooltherm K10 G2 Soffit Board is a super high performance, fibre-free rigid thermoset phenolic insulation core, sandwiched between an upper tissue-based facing and a lower facing of highly reflective reinforced aluminium foil autohesively bonded to the insulation core during manufacture.

Kooltherm K10 G2 Soffit Board is manufactured without the use of CFCs/HCFCs and has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).



Kingspan Kooltherm®
K10 G2 Soffit Board

- High performance rigid thermoset phenolic insulation
- Fibre-free, closed cell insulation core
- Group 2-S for interior lining applications
- Resistant to the passage of water vapour
- Easy to handle and install
- Ideal for new build and refurbishment
- Rodent, mould and fungi resistant
- No CFC or HCFC used in manufacture
- Has zero ODP and low GWP
- NZBC and AS/NZS 4859.1:2018 compliant

Figure 1.
Concrete Soffit Floor / Roof Installation.



Kooltherm® K10 G2 Soffit Board

Product Performance Data

Product Data	
Thermal Conductivity (λ -value) at 15°C	0.022 W/mK (Insulant Thickness \geq 45 mm) 0.023 W/mK (Insulant Thickness 25 - 44 mm)
Emittance (Foil Face)	E0.05
Product Dimensions	2400 mm x 1200 mm (2.88 m ²)
Product Thickness	25, 30, 40, 50, 60, 70, 80, 90 mm

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

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

Scope of Use

Kooltherm K10 G2 Soffit Board is a thin solution suitable for ceiling (soffit) and floor insulation. It has fibre-free, phenolic core and both an upper tissue-based facing and a lower facing of highly reflective reinforced aluminium foil autohesively bonded to the insulation core during manufacture.

- Suitable for concrete ceiling/floor interior lining applications (NZBC Group 2-S when tested to ISO 9705)
- Suitable with direct fit onto concrete ceiling/floor or fixed with proprietary grid systems comprising metal furring bars or timber battens.

Product Performance

Construction R-Value for various thicknesses of Kingspan Kooltherm K10 G2 Soffit Board.

Roof application, no ceiling (150 mm concrete) See Figure 1.		
Product Thickness	Heat Flow In	Heat Flow Out
25 mm	1.30	1.30
30 mm	1.50	1.50
40 mm	1.90	2.00
50 mm	2.40	2.50
60 mm	2.80	3.00
70 mm	3.30	3.40
80 mm	3.70	3.90
90 mm	4.10	4.30

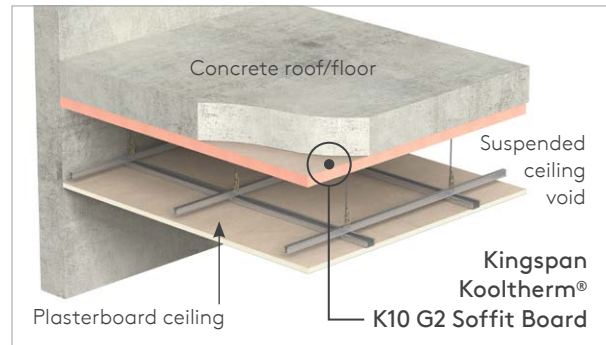


Figure 2. Concrete soffit floor with suspended ceiling void.

Roof application, suspended ceiling void greater than 300mm (150 mm concrete) – See Figure 2.		
Product Thickness	Heat Flow In	Heat Flow Out
25 mm	2.40	1.90
30 mm	2.60	2.20
40 mm	3.00	2.60
50 mm	3.50	3.10
60 mm	4.00	3.60
70 mm	4.40	4.00
80 mm	4.80	4.50
90 mm	5.30	5.00

The R-values shown are construction R-values for the building element as required by the Energy Efficiency requirements of the New Zealand Building Code, calculated in accordance with AS/NZS 4859.2:2018 & NZS 4214.

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

General

- Group 2-S for interior lining applications
- NZBC and AS/NZS 4859.1:2018 compliant
- Kooltherm K10 G2 Soffit Board is not subject to a warning or ban under section 26 of the Building Act 2004
- Resistant to the passage of water vapour
- Fibre-free, closed cell insulation core
- Ideal for new build and refurbishment
- Rodent, mould and fungi resistant
- FM Approved
- Product made in Australia.

Specification Guide

Kooltherm K10 G2 Soffit Board

The soffit insulation shall be Kingspan Kooltherm K10 G2 Soffit Board [] mm thick, with a tested SMOGRA_{RC} of not more than 100 m²/s² x 1000, Average Smoke Production Rate less than 5m²/s, comprising a CFC/HCFC-free and zero Ozone Depletion Potential (ODP) rigid thermoset phenolic insulation core with a tissue based facing on one side and composite foil on the other side, manufactured under a management system certified to ISO 9001:2015, ISO 14001:2015, ISO 45001:2018 and ISO 50001:2018 by Kingspan Insulation Limited and shall be installed in accordance with the instructions issued by them. A Project Specific Warranty provided by Kingspan Insulation must be submitted.

Kooltherm® K10 G2 Soffit Board

Product Performance Data

Limitations

- Cannot be permanently exposed to weather elements
- Not suitable for building areas where the product requires to be better than Material Group Number 2-S (performance determined under conditions described in ISO 9705).

Compliance

Kooltherm K10 G2 Soffit 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.

Standards and Approvals

Kooltherm K10 G2 Soffit 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	AS 2498.3	Typically exceeds 100 kPa at 10% compression
Water Vapour Resistance	AS 2498.5-1993 Method 5	> 35 MN.s/g

Fire Performance

Test	Test Method	Result
Ignitability, Flame spread Heat release, Smoke release	AS 1530.3	Spread of Flame Index: 0 Smoke Development ≤ 3
Flame Propagation (AS 1366)	AS 2122.1	Complies
NZBC Group Number in accordance with Clause C3.4	ISO 9705	Group 2-S. Av. Smoke Production Rate no greater than 5.0 m ² s ⁻¹ (0-10 min)

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
Recyclability	Non-contaminated insulation site waste is recyclable, but there are currently no facilities in New Zealand to process returned material
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 Global Warming Potential (GWP)	Manufactured with a blowing agent that has low GWP
Blowing Agent Ozone Depletion Potential (ODP)	Manufactured with a CFC/HCFC-free blowing agent that has zero ODP
Packaging	Contains 0% recycled product Polythene wrap and EPS skids 100% recyclable



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

