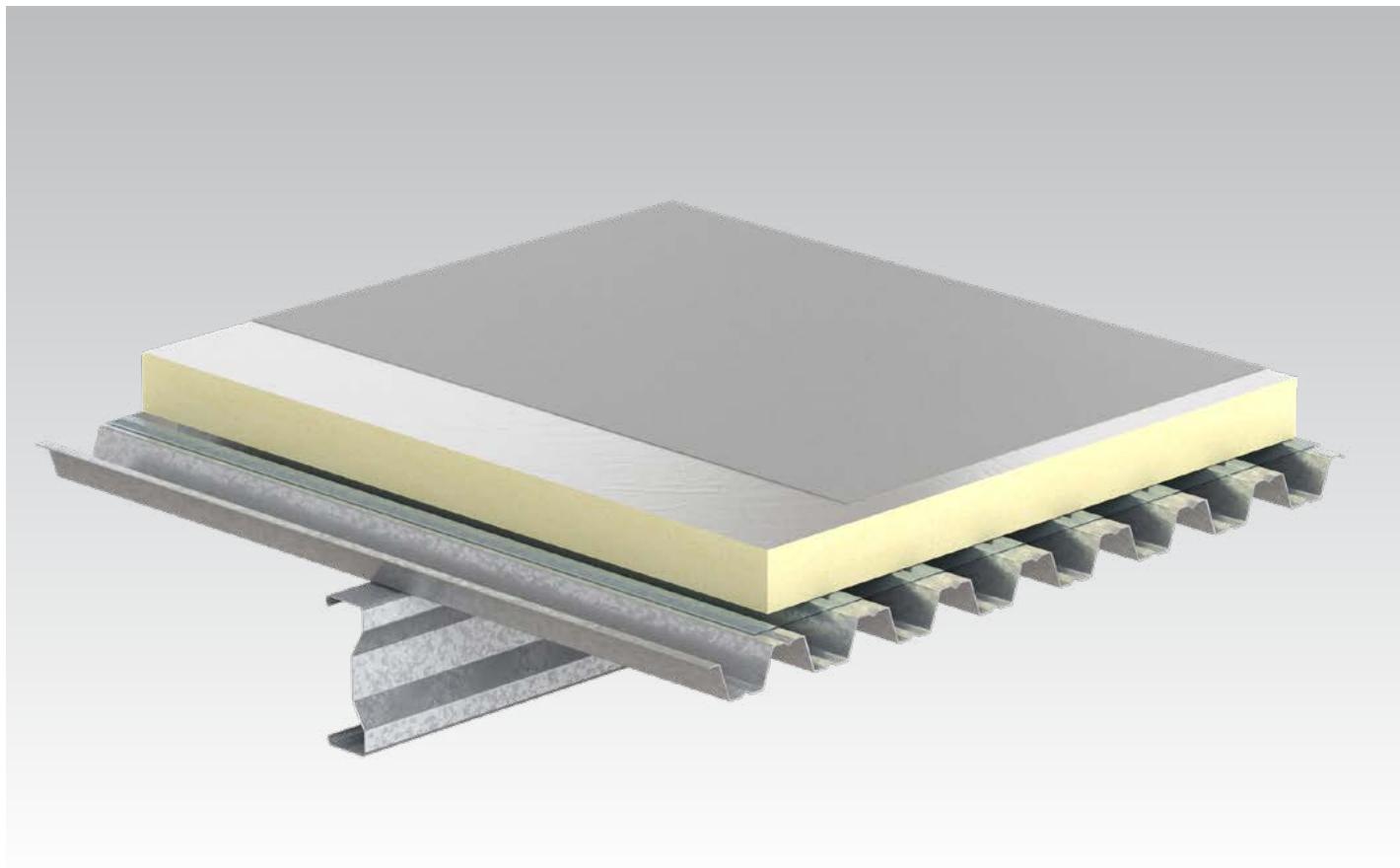


Product Data Sheet

Therma[™] TR28

Flat Roof Insulation Board

Insulation for Waterproofed Flat Roofs



Therma[™]


Kingspan[®]

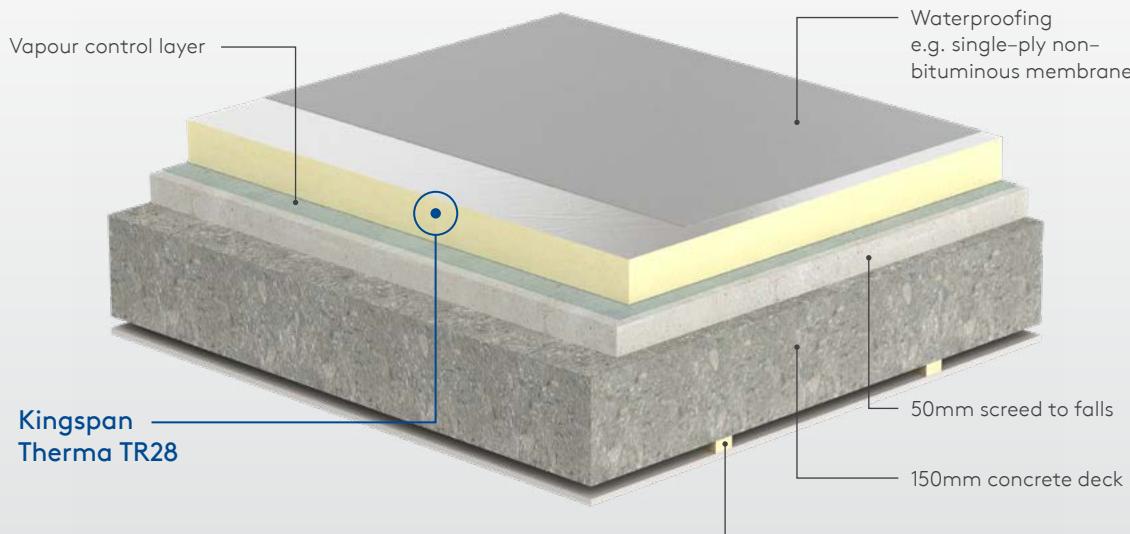
Therma™ TR28

Product Description

Therma™

Therma TR28 Flat Roof Insulation Board is a fibre-free rigid polyisocyanurate (PIR) building insulation, faced on both sides with a gas tight reflective aluminium foil composite, autohesively bonded to the insulation core during manufacture. This gas tight reflective surface improves the overall thermal resistance of Therma TR28 Flat Roof Insulation Board.

Therma TR28 is manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).



- Rigid polyisocyanurate (PIR) thermoset insulation
- Easy to handle and install
- Ideal for new build and refurbishment
- Compatible with most green roof systems
- Compatible with most 2-layer bitumen roofing systems using a (partially) self-adhered bonded roofing membrane and torched on top sheet
- Compatible with most single-ply non-bituminous membranes that are fully bonded with solvent based adhesive systems
- NZBC and AS/NZS 4859.1:2018 compliant

Fibre-free
Core

Product Details

Product Description

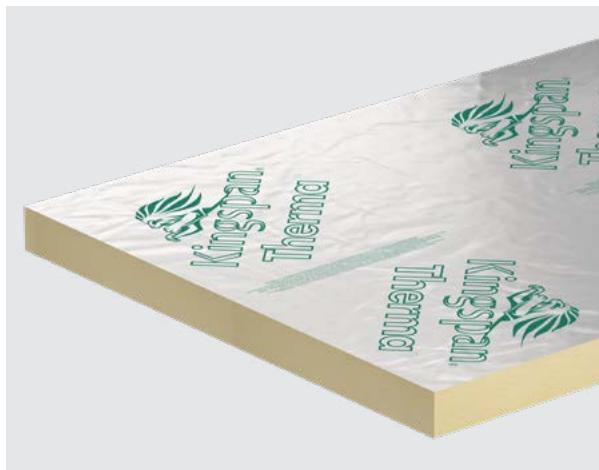


Figure 1. Aluminium foil-faced Therma TR28.

Therma TR28 is a fibre-free rigid polyisocyanurate (PIR) thermoset insulation, faced on both sides with a gas tight reflective aluminium foil composite, autohesively bonded to the insulation core during manufacture.

Therma TR28 is manufactured with a blowing agent that has zero Ozone Depletion Potential (ODP) and low Global Warming Potential (GWP).

Product Data

Thermal Conductivity at 15°C (λ -value) as per AS/NZS 4859.1:2018	0.023 W/mK
Product Dimensions	2285mm x 1195mm (2.73m ²)
Product Thickness	40, 80 and 100 mm Other thicknesses available on request with minimum order quantities.

Product R-value

Nominal Product Thickness	Declared Product R-value at 15°C
40mm	1.75
80mm	3.55
100mm	4.45

The λ -values and R-values detailed on this page are quoted in accordance with AS/NZS 4859.1:2018. Product R-values are calculated using the calculated $\lambda_{50/90}$, not the declared value.

Scope of Use

Therma TR28 are fibre-free rigid thermoset insulation, faced on both sides with a gas tight reflective aluminium foil composite.

Therma TR28 Flat Roof Insulation Board is suitable for:

- Both new build and refurbishment
- Green roof membrane systems
- Bonding with most cold applied synthetic self-adhesive roof membranes, and two layer torch on bitumen membrane systems using a (partially) self-adhered bonded roofing membrane and torched on top sheet
- Use with steel roof claddings and/or mechanically fixed roof membranes that forms as part of a proprietary roofing system
- Therma TR28 is generally used within proprietary roofing systems. For technical details and installation instructions consult the proprietary roofing system supplier.

Example Constructions

Therma TR28 in a Dense Concrete Deck with Suspended Ceiling

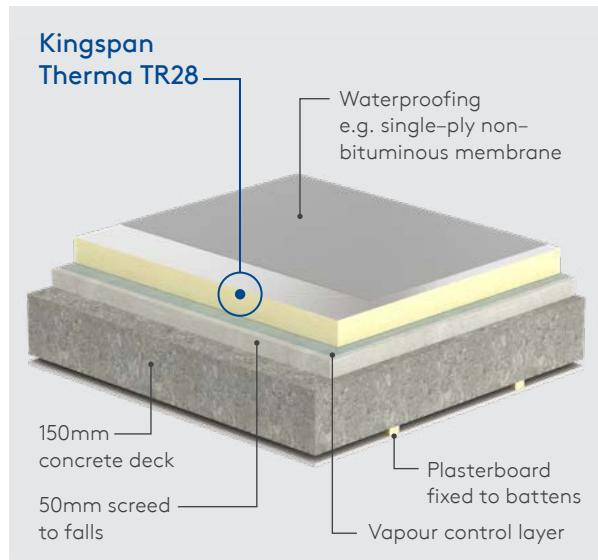


Figure 2. Concrete Deck with Suspended Ceiling.

Therma TR28 in a Timber Deck with Suspended Ceiling



Figure 3. Timber Deck with Suspended Ceiling.

Therma TR28 in a Metal Deck with No Ceiling

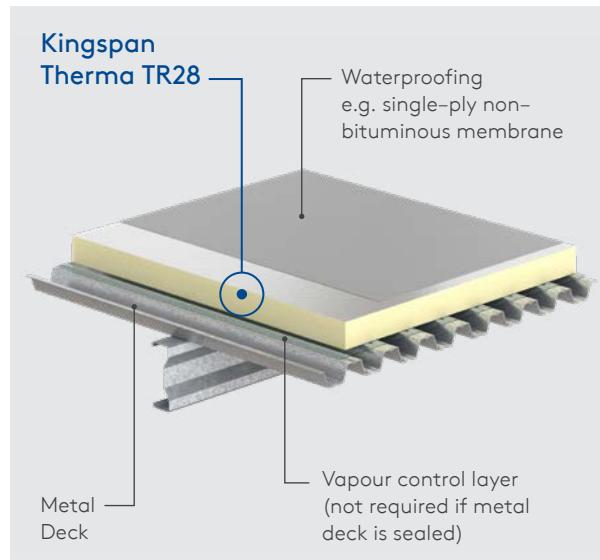


Figure 4. Metal Deck with No Ceiling.

Therma TR28 in a Semi-Intensive Green Roof Covering – Dense Concrete Deck with Suspended Ceiling

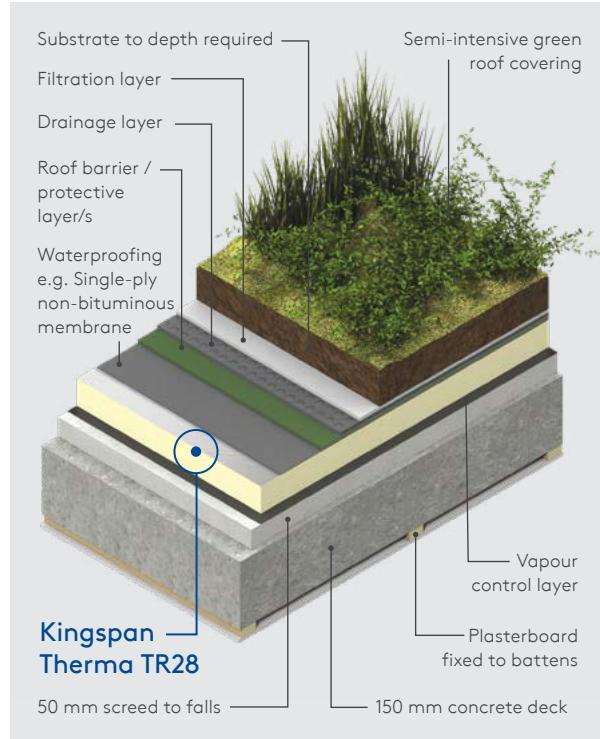


Figure 5. Semi-Intensive Green Roof Covering – Dense Concrete Deck with Suspended Ceiling

Product Details

General

- NZBC and AS/NZS 4859.1:2018 compliant.
- Therma TR28 Flat Roof Insulation Board is not subject to a warning or ban under section 26 of the Building Act 2004.
- When renovating a roof with an existing bituminous product, it is important to check the bitumen's compatibility with Therma TR28. If there is incompatibility, a separation layer will need to be used. However, this should only be used after satisfying a compatibility test with the separation layer.
- Therma TR28 generally does not require regular maintenance. However, damaged, dented, or fractured Therma TR28 must be replaced.
- Therma TR28 Flat Roof Insulation Board is manufactured in Spain.

Specification Guide

The roof insulation shall be Therma TR28 ___ mm thick, comprising a rigid thermoset insulation core with gas tight facings 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 and shall be installed in accordance with the proprietary system instructions.

Limitations

- Cannot be permanently exposed to weather elements.
- Not a component for structural bracing.
- Not a fall arrest product. Do NOT stand on or otherwise support your weight on Therma TR28 unless the insulation board is fully supported by a load bearing surface.
- The aluminum composite foil on Therma TR28, when in contact with galvanised steel in the presence of water may have potential for galvanic corrosion.
- Compatible with most single-ply non-bituminous membranes that are fully bonded with solvent based adhesive system. Synthetic cold bonding adhesive must be tested for compatibility. Refer to the technical details and installation instructions from the proprietary roofing system supplier.
- Therma TR28 is suitable for use on access decks subject to limited foot traffic. Where frequent foot traffic is liable to occur, it is recommended that the roof surface is protected by specially designed walkways, or a trafficable material.
- Therma TR28 cannot be used directly with heat applied membranes such as open flame gas torch or excessive heat. Torch on membranes should only be used on the top sheet of a two-layer membrane system where heat is applied onto the membrane and not on Therma TR28. Always refer to the technical details and installation instructions from the proprietary roofing system supplier.

Compliance

Therma TR28 Flat Roof Insulation Board meets or contributes to meeting 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 relevant proprietary system installation instructions.
- It is installed by or under guidance of Licensed Building Practitioners.

Standards and Approvals

Therma TR28 is manufactured to the highest standards and certified under the following management systems:

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

Product Testing

Characteristic	Standard	Result
Thermal conductivity	AS/NZS 4859.1:2018	See above thermal conductivity and Product R-values
Compressive Stress	EN 826:1996	≥ 175kPa at 10% compression
Flame Propagation	AS 2122.1:1993 AS 1366.2:1992	Complies

Durability

When Therma TR28 Flat Roof Insulation Board products are installed in accordance with the scope of use and the proprietary system guidelines, it can be expected to have a long life of service.

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

Product Details

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

Storage and Handling

The packaging of Therma TR28 should not be considered adequate for 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 as this may cause delamination of facers.

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 unless compatibility testing has been completed by the proprietary system supplier.

Damaged boards or boards that have been in contact with harsh solvents or acids should NOT be used.

Health and Safety

Kingspan Insulation products are chemically inert and safe to use. A Product Safety Data Sheet is available from Kingspan Insulation NZ Ltd. Ensure all relevant New Zealand health and safety guidelines are followed when using the product.

Warning: Do NOT stand on or otherwise support your weight on Therma TR28 unless the board is fully supported by a load bearing surface.



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

Technical Enquiry:

For technical queries contact: technical@kingspaninsulation.co.nz or 0800 806 595.

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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

