

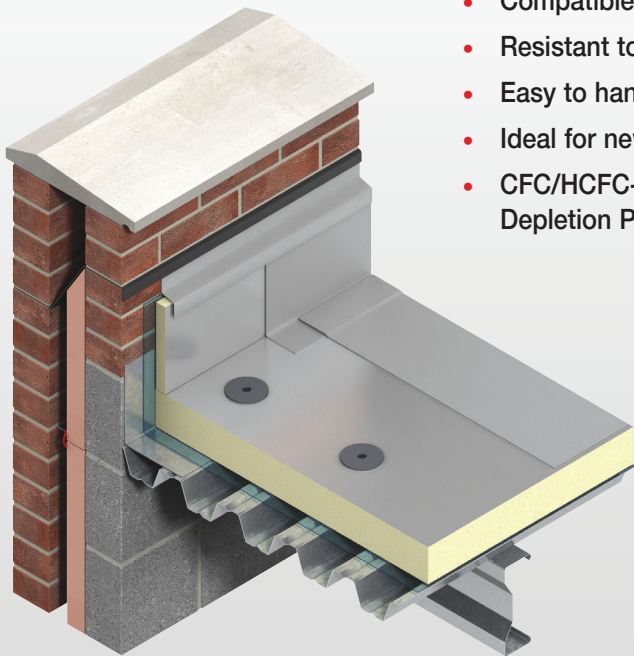


Therma™ TR26

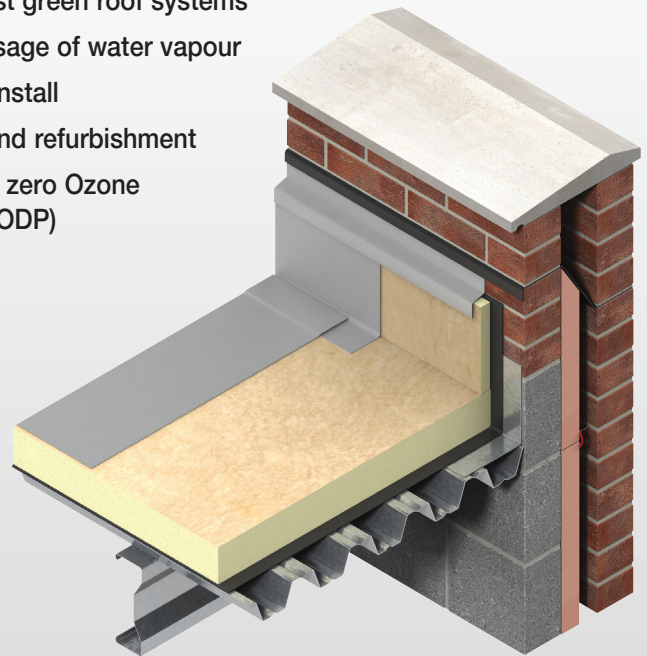
Therma™ TR27

INSULATION FOR WATERPROOFED FLAT ROOFS

- High performance rigid thermoset insulation
- FM approved for Class 1 steel deck roof assemblies
- Compatible with most green roof systems
- Resistant to the passage of water vapour
- Easy to handle and install
- Ideal for new build and refurbishment
- CFC/HCFC-free with zero Ozone Depletion Potential (ODP)



- Fully compatible with most mechanically fixed single-ply waterproofing systems
- Installation technique is ideal for fast track building programmes



- Fully compatible with single-ply non-bituminous membranes that are fully bonded with solvent based adhesive systems
- Fully compatible with most bitumen based and mastic asphalt waterproofing systems



Typical Constructions

Concrete Deck

Kingspan Therma™ TR26 in a Dense Concrete Deck with Suspended Ceiling

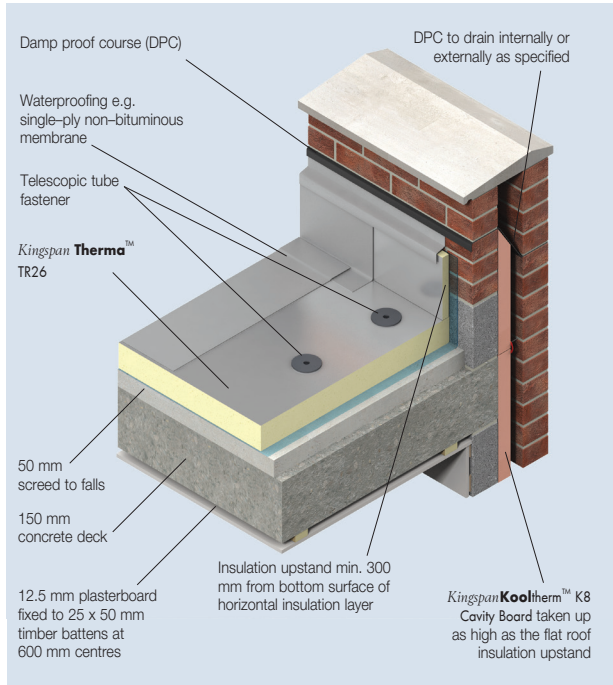


Figure 1

Metal Deck

Kingspan Therma™ TR26 in a Metal Deck with No Ceiling

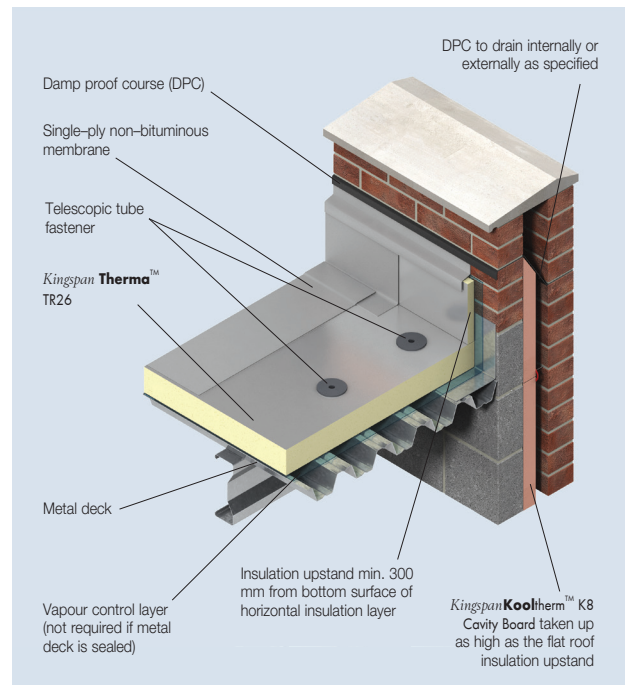


Figure 3

Kingspan Therma™ TR27 in a Dense Concrete Deck with Suspended Ceiling

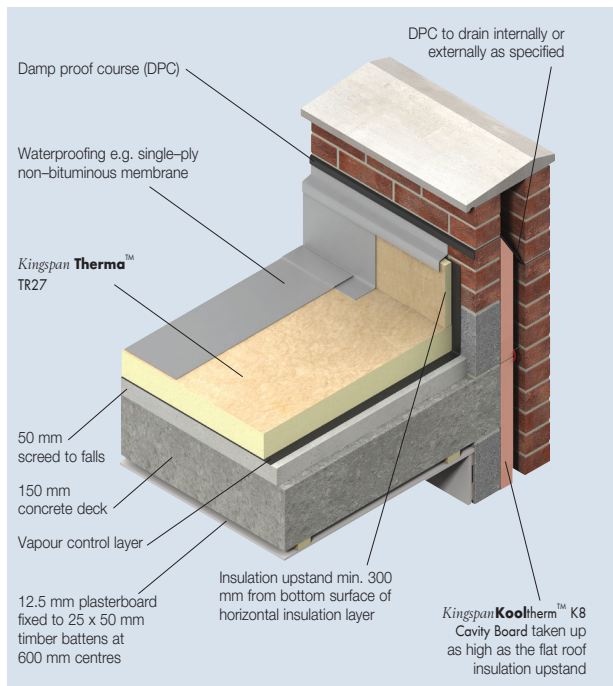


Figure 2

Kingspan Therma™ TR27 in a Metal Deck with No Ceiling

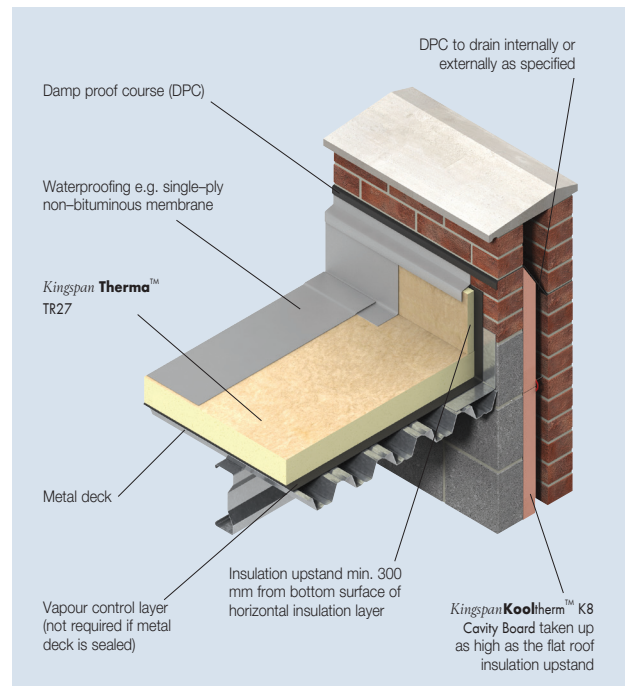


Figure 4

Green Roof Systems

Kingspan Therma™ TR26 in an Extensive Green Roof Covering – Metal Deck with No Ceiling

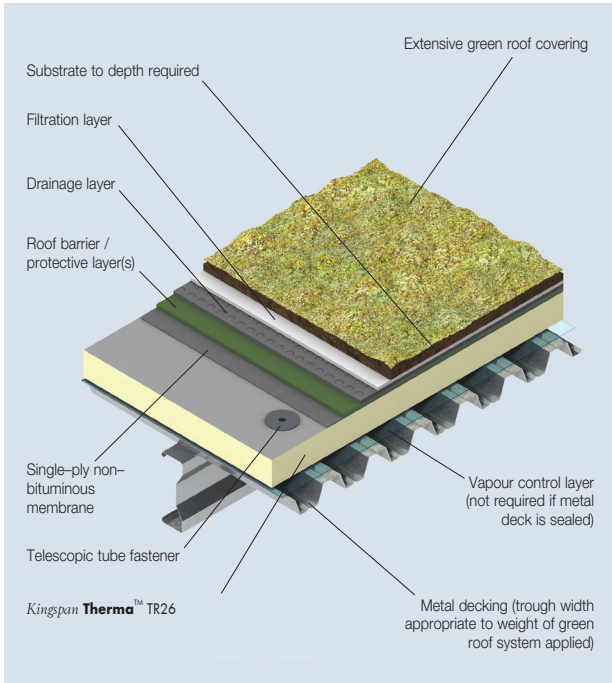


Figure 5

Kingspan Therma™ TR27 in an Extensive Green Roof Covering – Metal Deck with No Ceiling

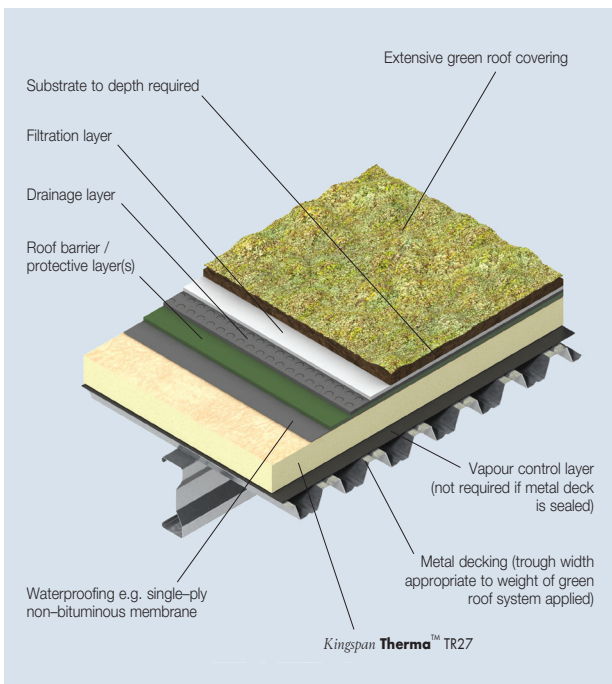


Figure 6

Kingspan Therma™ TR26 in a Semi-Intensive Green Roof Covering – Dense Concrete Deck with Suspended Ceiling

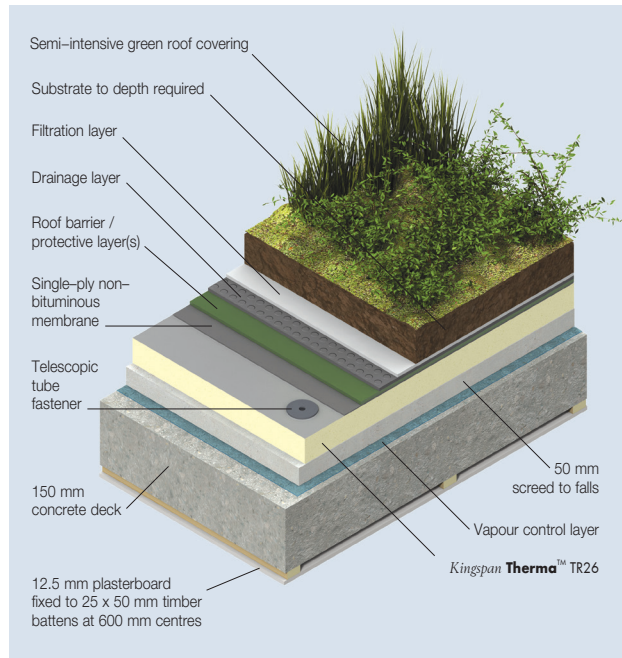


Figure 7

Kingspan Therma™ TR27 in a Semi-Intensive Green Roof Covering – Dense Concrete Deck with Suspended Ceiling

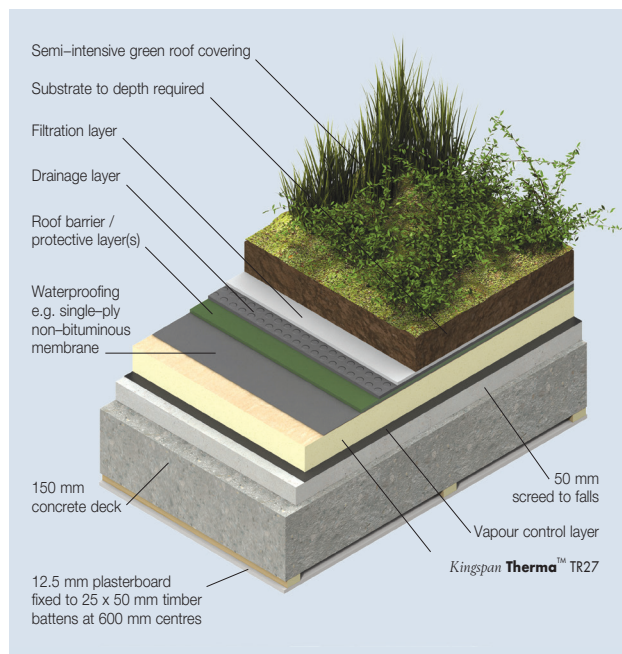


Figure 8

Product Details

Product Description

Kingspan Therma™ TR26

Kingspan Therma™ TR26 is a high performance fibre-free rigid thermoset polyisocyanurate (PIR) insulation core, manufactured with Nilflam™ technology, faced on both sides with a low emissivity composite foil autohesively bonded to the insulation core during manufacture.

Kingspan Therma™ TR27

Kingspan Therma™ TR27 is a high performance fibre-free rigid thermoset polyisocyanurate (PIR) insulation core, manufactured with Nilflam™ technology, faced on both sides with a coated glass tissue autohesively bonded to the insulation core during manufacture.

Kingspan Therma™ products are manufactured without the use of CFCs/HCFCs and have zero Ozone Depletion Potential (ODP).



| Product Data | |
|--|---|
| | 0.022 W/mK (<i>Kingspan Therma™</i> TR26) |
| | 0.028 W/mK (<i>Kingspan Therma™</i> TR27, Insulant Thickness < 80 mm) |
| Thermal Conductivity (λ -value) at 23°C | 0.026 W/mK (<i>Kingspan Therma™</i> TR27, Insulant Thickness 80 - 119 mm) |
| | 0.025 W/mK (<i>Kingspan Therma™</i> TR27, Insulant Thickness \geq 120 mm) |
| | 2270 mm x 1200 mm (2.72 m ²) |
| Product Dimensions | 1200 mm x 1200 mm (1.44 m ²)* 600 mm x 1200 mm (0.72 m ²)* |
| Product Thickness | 30, 40, 50, 60, 70, 80, 85, 90, 95, 100, 105, 110, 115, 120, 125, 130, 135, 140, 150 mm |

*Applies to *Kingspan Therma™* TR27 only

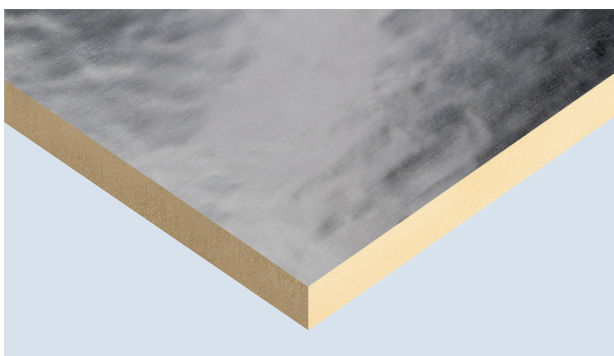


Figure 9 Super high performance foil faced *Kingspan Therma™* TR26

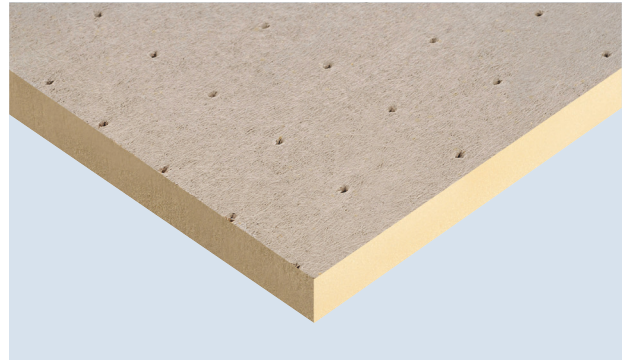


Figure 10 Super high performance glass tissue faced *Kingspan Therma™* TR27

Product R-value

Kingspan Therma™ TR26

| Product Thickness | Product R-value |
|-------------------|-----------------|
| 30 mm | 1.35 |
| 40 mm | 1.80 |
| 50 mm | 2.30 |
| 60 mm | 2.75 |
| 70 mm | 3.20 |
| 80 mm | 3.65 |
| 85 mm | 3.90 |
| 90 mm | 4.10 |
| 95 mm | 4.35 |
| 100 mm | 4.60 |
| 105 mm | 4.80 |
| 110 mm | 5.05 |
| 115 mm | 5.25 |
| 120 mm | 5.50 |
| 125 mm | 5.75 |

Kingspan Therma™ TR27

| Product Thickness | Product R-value |
|-------------------|-----------------|
| 30 mm | 1.05 |
| 40 mm | 1.45 |
| 50 mm | 1.80 |
| 60 mm | 2.15 |
| 70 mm | 2.55 |
| 80 mm | 3.05 |
| 85 mm | 3.25 |
| 90 mm | 3.45 |
| 95 mm | 3.65 |
| 100 mm | 3.85 |
| 110 mm | 4.25 |
| 120 mm | 4.90 |
| 125 mm | 5.10 |
| 130 mm | 5.30 |

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.

Specification Guide

Kingspan Therma™ TR26

The roof insulation shall be *Kingspan Therma™* TR26 ____ mm thick, comprising a CFC/HCFC-free and zero Ozone Depletion Potential (ODP) rigid thermoset insulation core with composite foil 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 Limited and shall be installed in accordance with the instructions issued by them.

Kingspan Therma™ TR27

The roof insulation shall be *Kingspan Therma™* TR27 ____ mm thick, comprising a CFC/HCFC-free and zero Ozone Depletion Potential (ODP) rigid thermoset insulation core with coated glass tissue 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 Limited and shall be installed in accordance with the instructions issued by them.

Tapered Roofing

Kingspan Therma™ TR26 and *Kingspan Therma™* TR27 are also available in tapered versions (*Kingspan Therma™* TT46 and *Kingspan Therma™* TT47) that come with a supporting design service. This ensures that the most cost-effective solution for a roof is identified and that the end result is a tapered system design which meets a roof's rainwater run-off and insulation requirements.

Roof Loading/Traffic

Kingspan Therma™ TR27 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.

Spanning on Metal Decks

The designer's attention is drawn to the requirement that insulation boards are of the minimum thicknesses shown in the table below, when used over metal decks with trough openings as shown.

| Trough Opening (mm) | Minimum Insulant Thickness (mm) |
|---------------------|---------------------------------|
| ≤75 | 25 |
| 76 – 100 | 30 |
| 101 – 125 | 35 |
| 126 – 150 | 40 |
| 151 – 175 | 45 |
| 176 – 200 | 50 |
| 201 – 225 | 55 |
| 226 – 250 | 60 |

Standards and Approvals

Kingspan Therma™ TR26 and *Kingspan Therma™* TR27 are 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 |

Kingspan Therma™ TR26 and *Kingspan Therma™* TR27 are also manufactured to the highest standards in accordance with the requirements of:

| Requirement | Rigid polyisocyanurate (PIR) and polyurethane (PUR) products for building end-use applications |
|-------------|--|
| BS 4841-3* | Specification for laminated boards (roofboards) with auto-adhesively or separately bonded facings for use as roof board thermal insulation under built-up bituminous roofing membranes |
| BS 4841-4 | Specification for laminated boards (roofboards) with auto-adhesively or separately bonded facings for use as roofboard thermal insulation under single-ply roofing membranes |

*Applies to *Kingspan Therma™* TR27 only

Product Testing

| Characteristic | Standard | Result |
|-------------------------|-----------|--|
| Compressive Strength | AS 2498.3 | Typically exceeds 150 kPa at 10% compression |
| Water Vapour Resistance | AS 2498.5 | > 100 MN-s/g (<i>Kingspan Therma™</i> TR26) > 7 MN-s/g (<i>Kingspan Therma™</i> TR27) |

Fire Performance

Kingspan Therma™ TR26 and *Kingspan Therma™ TR27*, when subjected to the British Standard fire test specified in the table below, will achieve the result shown, when waterproofed with a single-ply waterproofing membrane.

| Test | Result |
|--|--|
| BS 476-3: 2004 (External fire exposure roof test) | Dependent on single-ply membrane adopted |

Kingspan Therma™ TR27, when subjected to the British Standard fire test, specified in the table below, will achieve the result shown when waterproofed with 3 layer built-up felt and a loading coat of 10 mm chippings. For specifications without the chippings please consult the manufacturer of the mineral surfaced cap sheet for their fire classification details.

| Test | Result |
|--|------------|
| BS 476-3: 2004 (External fire exposure roof test) | FAA Rating |

Further details on the fire performance of Kingspan Insulation products may be obtained from the Kingspan Insulation Technical Service (see back cover).

FM Certification

FM Certification

Kingspan Therma™ TR26 and *Kingspan Therma™ TR27* are certified as achieving Class 1 Insulated Steel Deck Pass to Factory Mutual Research Standards 4450 (Approval Standard for Class 1 Insulated Steel Deck Pass) and 4470 (Approval Standard for Single-Ply, Polymer-Modified Bitumen Sheet, Built-Up Roof (BUR) and Liquid Applied Roof Assemblies for use in Class 1 Non-combustible Roof Deck Construction), subject to the conditions of approval as a roof insulation product for use in Class 1 roof constructions as described in the current edition of the Factory Mutual Research Approval Guide.



Durability

If correctly applied, *Kingspan Therma*[™] 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 Therma[™] products are warranted for a period of 10 years for both residential and commercial installations.*

** Subject to the terms of the complete Kingspan Therma[™] warranty document which is available upon request or downloadable from www.kingspaninsulation.asia*

Environmental Data

| Aspect | Characteristic |
|---|---|
| Recyclability | Non-contaminated insulation site waste is recyclable, but there are currently no facilities in Australia 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 |

Contact Details

General Enquiries

Email: info@kingspaninsulation.asia

Kingspan Insulation Pty. Ltd. reserves the right to amend product specifications without prior notice. The information, technical details and fixing instructions etc. included in this literature are given in good faith and apply to uses described. Recommendations for use should be verified as to the suitability and compliance with actual requirements, specifications and any applicable laws and regulations. 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.asia



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