

Installation Guide

Kooltherm[®] K10 G2 Soffit Board

Soffit Insulation



Kooltherm[®]

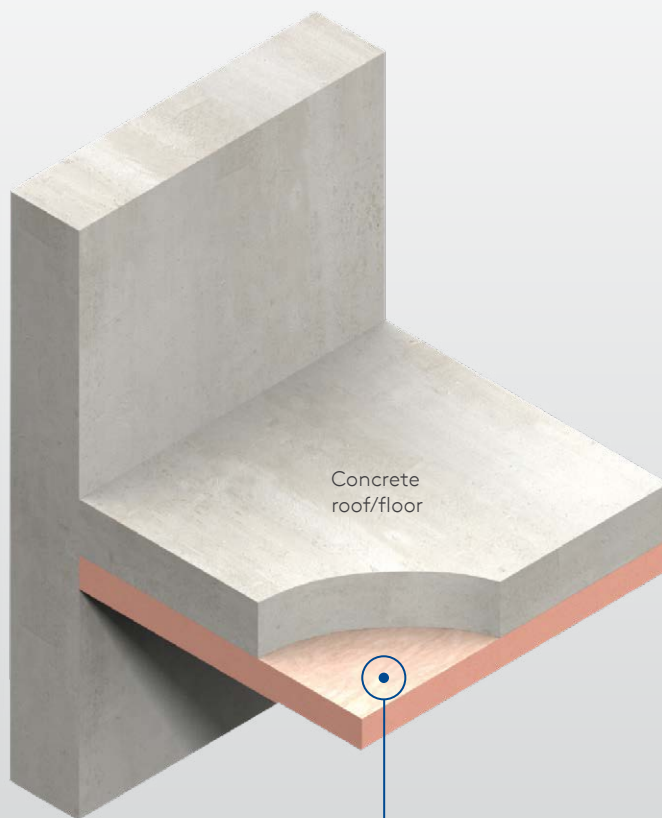
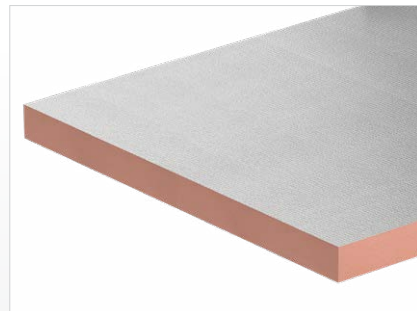

Kingspan[®]

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.



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 Installation Instructions

Fixing Directly to Concrete Soffits

Kooltherm K10 G2 Soffit Board can be fully restrained to a concrete soffit by the use of minimum 11 appropriate insulation fasteners with a minimum head diameter of 35 mm.

1. The fasteners should be evenly distributed over the whole area of the board and designed to provide suitable restraint for the project requirements. Consultation with the chosen fastener supplier is recommended.
2. Board joints can be either staggered (see Figure 4) or squared (see Figure 5, overleaf) and taped with 96 mm wide silver Kingspan Insulation Tape. Four fasteners along each length - no less than 50 mm - no more than 150 mm from edge of board, three fasteners along the middle (offset from edge positions as per diagram Figure 2).
3. Where the board may be subject to external wind pressure, the requirement for additional fixings should be assessed in accordance with appropriate wind load standards.
4. Consideration should be given to the material the fixing is made from and should be deemed appropriate for application, exposure and fire rating by the fixing manufacturer.

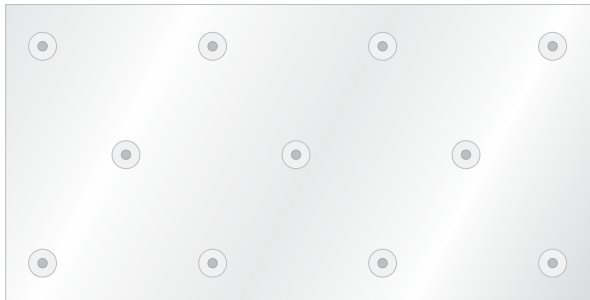


Figure 2. Fastener pattern (11 per board)
Board size to 2400 mm x 1200 mm - 3.81 fixings/m².

Why 11 fixings?

Best practice determines that any rigid board insulation, should be fixed with 11 mechanical fixings for very good reasons:

- There will always be differential expansion and contraction between any rigid insulation material and adjacent building products due to varying moisture content and temperature.
- In any concrete forming, there will be an uneven surface throughout the slab.
- Where concrete formwork is joined it is normal to have ridges of up to 3mm which make the concrete surface uneven.

- An insulation board held horizontally may bow like any other sheetmaterial under its own weight.

Using 11 fixings ensures that the insulation board has a strong and permanent fix under the concrete soffit and that it is not compromised by any of the above issues. It also provides a proven robust fire safe solution.

These best practice recommendations are a result of over 30 years of Kingspan Insulation experience in soffit applications.

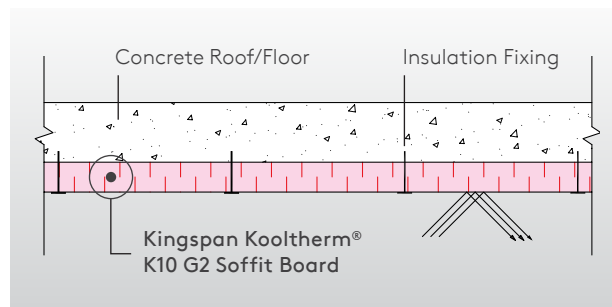


Figure 3. Side elevation - Concrete Soffit with Kooltherm K10 G2 Soffit Board.

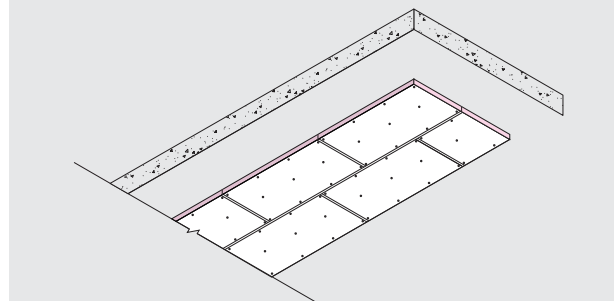


Figure 4. Board joints staggered.



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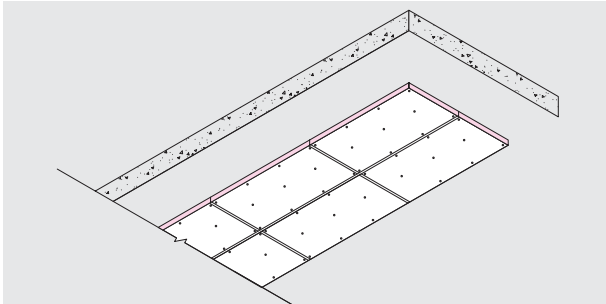


Figure 5. Board joints squared.



Installation around Fire Collars

1. Fitting Kooltherm K10 G2 Soffit Board tight to the fire collar is recommended to reduce the effects of thermal bridging through the slab.
2. Do not cover the face of the fire collar. For fire collars to activate in a fire situation the front face needs to be exposed. This is particularly important when using cast-in collars as the face will be flush with the concrete and it would be easy to cover with the insulation board.

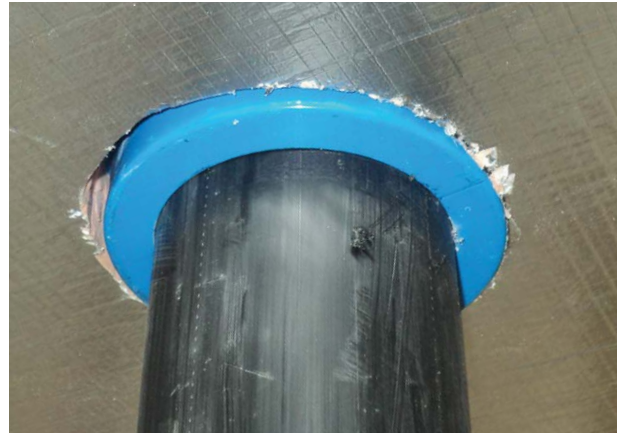


Figure 6. Penetration example - Kooltherm K10 G2 Soffit Board installed tight around the fire collar and HDPE service pipe.

Proprietary Grid Systems

Kooltherm K10 G2 Soffit Board can also be fixed to a proprietary grid system comprising metal furring bars or timber battens.

For further information regarding proprietary grid system specifications, please contact the Kingspan Insulation Technical Service Department.

For advice on ancillary materials, such as fixings and tapes please contact our Technical Services Department.

Kooltherm® K10 G2 Soffit Board Installation Instructions

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.

Taping

For all fixing methods board joints should be taped with 96mm wide silver Kingspan Insulation Tape.

1. Firstly, ensure that the climate conditions are suitable for the tape being used as well as the product the tape is to be applied too.
2. The surface of the Kooltherm K10 G2 Soffit Board to which aluminium foil tape is being applied, should be free of dust, dirt or oils. In any case, the surface should be cleaned with a dry cloth before application of the tape.
3. The release liner on the tape should be removed 300 - 600 mm at a time and the adhesive face pressed firmly

onto the insulation facing. Care should be taken not to stretch the tape tightly as this will create buckles and voids in the contact area.

4. Care must also be taken to apply the tape over the centre of the joint so that there is adequate area on both sides of the joint for the tape to bond. Uneven width distribution also puts additional shear stress on the smaller side of the butt joint.
5. The tape should then be wiped firmly from the centre out (like wallpaper) with a plastic squeegee. The more pressure that is applied, the more surface contact will be reached, therefore, the greater the bond surface.
6. The tape should then be cut and fitted with a knife and scissors. The same wiping instructions should then be used as above.

In the absence of other protection exposed board edges should be protected by silver Kingspan Insulation Tape with a minimum 48mm wide overlap onto the board face (see Figure 7 below) or alternatively use a proprietary metal c-section.

Packaging

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

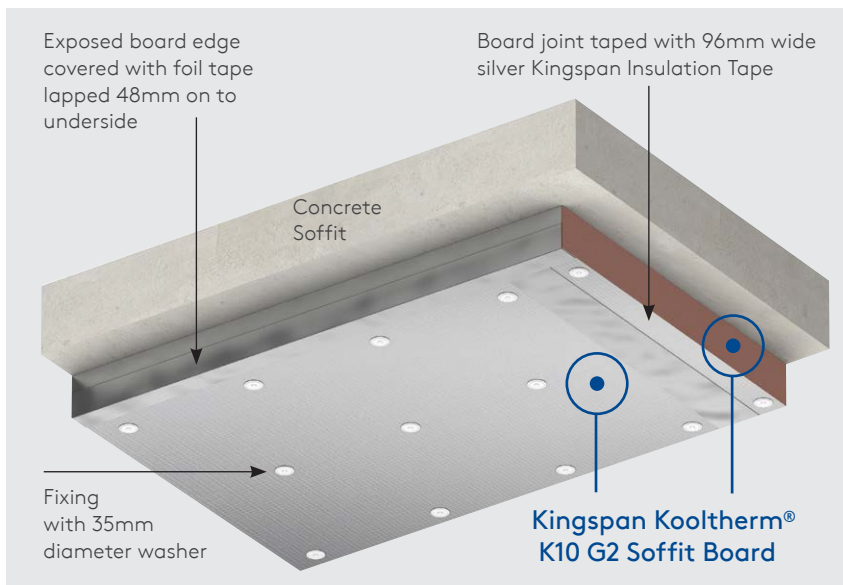


Figure 7. Exposed board edges are protected by silver Kingspan Insulation Tape with a minimum 48 mm wide overlap.

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Installation Instructions

Handling and Storage

Storage

The packaging of Kooltherm K10 G2 Soffit Board 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. The insulation core does not cause plasticiser migration from PVC.

Occupational Health & Safety

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

Please note that the reflective surfaces on this product are designed to enhance their thermal performance. As such, they will reflect light as well as heat, including ultraviolet light. Therefore, if these boards are being installed during bright or sunny weather, it is advisable to wear UV protective sunglasses or goggles and if the skin is exposed for a significant period of time, to protect bare skin with a UV block sun cream.

Foil facings are conductive to electricity – avoid contact with un-insulated electrical cables and fittings.

Installation must be in accordance with:

- AS/NZS 3999 Bulk Thermal Insulation Installation; and
- AS/NZS 3000 Electrical Installations (Wiring Rules).



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

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