

4711F FORMAN KINGSPAN KOOLTHERM K10FM SOFFIT BOARD

1. GENERAL

If you have pre-customised this work section using the "questions and answers" provided as part of the downloading process, it may be necessary to amend some clauses to suit the final project-specific version.

The section must still be checked and customised to suit the project being specified, by removing any other irrelevant details and adding project-specific details and selections.

This section relates to Kingspan Kooltherm® K10 FM Soffit Board insulation for structural ceiling (soffits);

- fixed directly to concrete soffits
- fixed to timber battens

Modify / expand this clause to suit requirements of this specification section.

This is a pre finished insulating system. Fixing method is dependent on whether fixing directly onto a concrete soffit, to timber battens or to proprietary grid system.

1.1 RELATED WORK

Refer to ~ for ~

Include cross references only to other work sections where they include directly related work.

Documents

1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC H1/AS1	Energy efficiency
NZS 4218:2004	Energy efficiency - Small building envelope
NZS 4243	Energy efficiency - Large buildings - Building thermal envelope
AS/NZS 4859.1	Materials for the thermal insulation of buildings - General criteria and technical provisions
BS EN ISO 9001: 2008	Quality management systems - Requirements

NZS 4218:2004 Energy Efficiency - Small Building Envelope, is recognised by NZBC, NZS 4218:2009 Thermal Insulation - Housing and Small Buildings, has not at the time of writing been recognised by NZBC. Consult with the BCA as to their requirements.

Delete from the DOCUMENTS clause any document not cited. List any additional cited documents. The following are related documents and if referred to in the work section need to be added to the list of DOCUMENTS.

NZBC C/AS1 - AS7	Protection from fire
NZBC H1/VM1	Energy efficiency
AS/NZS 3000	Electrical installations
AS/NZS 60598.2.2	Luminaires- Particular Requirements - Recessed luminaires
AS/NZS 60695.11.5	Fire hazard testing - Test flames - Needle-flame test method - Apparatus, conformity test arrangement and guidance
AS/NZS 3837	Method of test for heat and smoke release rates for materials and products using an oxygen consumption calorimeter

For residential applications the only recessed downlights that can be used are the new classes as classified in AS/NZS 60598.2.2. Insulation abutting or covering recessed downlights must pass the needle flame test to AS/NZS 60695.11.5.

NZBC C/AS3 - C/AS7 dictates that non-residential installations must have at least 100mm clearance.

1.3 MANUFACTURER/SUPPLIER DOCUMENTS

Manufacturer's and supplier's documents relating to this part of the work:
Kingspan Kooltherm® K10 FM Soffit Board brochure

Manufacturer/supplier contact details

Company: Forman Building Systems
Web: www.forman.co.nz
Email: sales@forman.co.nz
Telephone: 0800 45 4000

It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.

Warranties

1.4 WARRANTY - MANUFACTURER/SUPPLIER

Provide a material manufacturer/supplier warranty:

10 years: For Kingspan Kooltherm® K10 FM Soffit Board

Provide this warranty on the manufacturer/supplier standard form.

Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Modify or expand the clause to suit project or manufacturer/supplier requirements, options include:

- Change the standard form to be used (check with the manufacturer/supplier, use the general section 1237WA WARRANTY AGREEMENT if required)*
- Commence the warranty from the date of purchase (check with the manufacturer/supplier)*

1.5 WARRANTY - INSTALLER/APPLICATOR

Provide an installer/applicator warranty:

5 years: For Kingspan Kooltherm® K10 FM Soffit Board installation

Provide this warranty on the installer/applicator standard form.

Commence the warranty from the date of practical completion of the contract works.

Refer to the general section 1237 WARRANTIES for additional requirements.

Modify or expand the clause to suit project or installer/applicator requirements, options include:

- Change the standard form to be used (check with the installer/applicator, use the general section 1237WA WARRANTY AGREEMENT if required)*
- Commence the warranty from the date of installation (check with the installer/applicator)*

Requirements

1.6 QUALIFICATIONS

Installers to be experienced, competent trades people familiar with the materials and techniques specified.

1.7 NO SUBSTITUTIONS

Substitutions are not permitted to any of the specified systems, components and associated products listed in this section.

Performance

1.8 ENERGY EFFICIENCY

Maintain the energy efficiency requirements to [NZBC H1/AS1](#): Energy efficiency, 2.0 Building thermal envelope. Install to [NZS 4218](#) for small buildings, to [NZS 4243](#) for large buildings and to the Kingspan Kooltherm® K10 FM Soffit Board technical requirements.

Modify to suit requirements, particularly if using NZBC H1/VM1. NZBC H1 requires that the building performance index (BPI) of the complete envelope does not exceed a set figure. NZBC H1 sets the minimum requirements. NZS 4218 and NZS 4243 provide a schedule, a calculation and a modelling method for determining insulation. Ensure SELECTIONS reflect this.

2. PRODUCTS

Materials

2.1 SOFFIT BOARD

Kingspan Kooltherm® K10 FM Soffit Board to [AS/NZS 4859.1](#), comprising fibre free rigid thermoset insulation core with autohesively bonded facings on both sides, an upper tissue-based facing and a lower facing of highly reflective aluminium foil, manufactured under quality control systems approved to BS EN [ISO 9001](#).

Components

Mutually exclusive clauses follow depending on soffit type and the fixing medium.

NOTE: For advice on ancillary materials, i.e. fixings and tapes contact Forman Building Systems.

- 2.2 **MECHANICAL FIXINGS - CONCRETE SOFFITS**
Use a minimum 11 appropriate insulation fasteners with a minimum 35mm head diameter, approved by Kingspan Kooltherm® K10 FM Soffit Board Technical Department.
- 2.3 **FIXINGS - TIMBER BATTENS**
Fixings approved by Kingspan Kooltherm® K10 FM Soffit Board Technical Department.
- 2.4 **TAPES**
75mm (preferred) or 48mm wide Venture Tape aluminium foil tape or other approved by Kingspan Kooltherm® K10 FM Soffit Board Technical Department.

3. EXECUTION

Conditions

- 3.1 **DELIVERY, STORAGE AND HANDLING**
Take delivery of materials and goods and store on site and protect from damage. Protect finished surfaces, edges and corners from damage. Move/handle goods in accordance with manufacturer's requirements. Do not store outdoors and do not use boards that have been allowed to get wet. Reject and replace goods that are damaged or will not provide the required finish.
The general section 1270 CONSTRUCTION describes how deliveries are to be managed and the goods stored.
- 3.2 **SUBSTRATE**
Do not commence work until the substrate is dry, plumb, level and to the standard required by the sheet manufacturer's requirements.

Application - general

- 3.3 **STANDARDS AND TOLERANCES**
Ensure flat concrete roof (soffit) /concrete floor (soffit) is of an acceptable standard before soffit lining commences.
Refer to the general section 1270 CONSTRUCTION for general requirements.
Modify the clause to suit project specified.
NOTE: Ensure fire stopping details meet the fire rating requirements of the ceiling.
- 3.4 **CUTTING**
Cutting to be carried out using either a fine toothed saw or a sharp knife to cut through the insulation and paper backing of the plasterboard, then snapping the board face down over a straight edge and cutting the paper facing of the plasterboard on the other side. Ensure accurate trimming to achieve close butting joints and continuity of insulation.

Application - directly to concrete soffits

- 3.5 **FIX SOFFIT BOARD**
Fix and fully restrain Kingspan Kooltherm® K10 FM Soffit Board to concrete soffit using a minimum 11 appropriate insulation fasteners with minimum head diameter of 35mm. Distribute fasteners evenly over the whole area of the board allowing a minimum 40 mm penetration into a solid substrate.
- Ensure 4 fasteners along each length, no less than 50mm, no more than 150mm from edge of board and 3 fasteners along the middle.
Where the board may be subject to external wind pressure, the requirement for additional fixings should be assessed. Using 11 fixings ensures that the insulation board has a strong and permanent fix under the concrete soffit.

- 3.6 **BOARD JOINTS**
Kingspan Kooltherm® K10 FM Soffit Board joints to be staggered or squared and taped with a 75mm wide (preferred) or 48mm wide (minimum), Venture Tape aluminium foil tape or approved alternative to manufacturer's instructions.

Application - to timber battens/furring channels

Alternatively, a treated softwood batten/furring channel lay-out may be adopted if there is an uneven surface or mechanical services present and direct fixing is not possible. Modify to suit project requirements.

- 3.7 **BATTENS/FURRING CHANNELS**
Place 50mm x 25mm battens/furring channels at 600mm centres to coincide with the edges/centres of the boards. The battens/furring channels to be fixed to the soffit by the use of a suitable fixing method e.g. shot-fire may be considered.

- 3.8 **FIX SOFFIT BOARD**
Fix Kingspan Kooltherm® K10 FM Soffit Board to the treated timber battens/furring channels using suitable fixings. Place at maximum 300mm (maximum 200mm when using nails into timber) in rows not greater than 600mm apart.
Where the board may be subject to external wind pressure, the requirement for additional fixings should be assessed.

- 3.9 **BOARD JOINTS**
Kingspan Kooltherm® K10 FM Soffit Board joints to be staggered or squared and taped with a minimum 48 mm wide appropriate aluminium foil tape to manufacturer's instructions.

Application - finishing

- 3.10 **TAPING**
Ensure the surface of the Kingspan Kooltherm® K10 FM Soffit Board is free of dust, dirt or oils and that the climate conditions are suitable for the tape being used. Clean the surface with a dry cloth before application of the tape.

Tape board joints with a minimum 48mm wide foil tape over the centre of the join, to tape manufacturer's recommendations. Do not stretch tape tightly. Wipe tape firmly from the centre out with a plastic squeegee.

Protect board edges using foil tape lapped 48mm on to the underside of board, in the absence of other protection. Alternately use a UPVC c-section.

Completion

- 3.11 **REPLACE**
Replace damaged sheets or elements.
- 3.12 **CLEAN DOWN**
Clean down completed surfaces to remove irregularities to the sheet manufacturer's requirements, to leave completely smooth and clean to the standard required for following trades.
- 3.13 **REMOVE**
Remove debris, unused materials and elements from the site.

4. **SELECTIONS**
For further details on selections go to www.forman.co.nz.
Substitutions are not permitted to the following.
Select the options to suit the project and delete options not specified.

Materials

- 4.1 **SOFFIT BOARD**
Location/substrate: ~/~

Type/ product: Kingspan Kooltherm® K10 FM Soffit Board
 Fixing method: Mechanical Fastening
 Size: 2270mm x 1200mm (2.72m²)

Board thickness: ~mm

R value: ~

Board thickness: 25mm, 30mm, 40mm, 50mm, 60mm, 70mm, 80mm, 90mm, etc

R value:

Product thickness (including plasterboard)	Product R-value
20mm	R1.2
30mm	R1.4
40mm	R1.9
50mm	R2.5
60mm	R3.0
70mm	R3.5
80mm	R4.0
90mm	R4.5

The R-value is the product R-value; refer to www.forman.co.nz for Total R-value depending on wall application.