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INSULATION

01. GENERAL

*** *(please delete "items" not relevant to your specification)*

01.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Framed walls:

System – 1:

Thermal insulation panel system – Brick veneer timber and steel stud walls:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed to the external (cavity side) face of the stud wall; giving an insulation value of **R1.8** – heat flow in and heat flow out
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the external (cavity side) face of the stud wall; giving an insulation value of **R2.2** – heat flow in and heat flow out
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the external (cavity side) face of the stud wall; giving an insulation value of **R2.6** – heat flow in and heat flow out

01.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

01.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

02. MATERIALS

02.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10, 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

02.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

02.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Nail fixing – insulation panel to timber framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with integral zinc plated annular ring steel nail of sufficient length to suit board thickness.

Screw fixing – insulation panel to steel framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with separate zinc plated steel screws of sufficient gauge and length to suit board thickness.

03. INSTALLATIONS

03.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Framed walls:

System – 1:

Thermal insulation panel system – Brick veneer timber and steel stud walls.

Fixing: Secure FOILBOARD Insulation Panel to timber studs with the Foilboard fasteners with integral nails, using 3 fasteners per stud per panel.

&/or

Fixing: Secure FOILBOARD Insulation Panel to steel studs with the Foilboard fasteners and screw gun, using 3 fasteners per stud per panel.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

Note: Installation of FOILBOARD is best done after the frame, bracing, roof, fascia, windows and plumbing rough-in are all complete and frame inspection is passed. The top sheets should be fixed first (pushed up until they hit the underside of rafters). Top and bottom edges should lap onto top and bottom plates. Lintels should be covered and sheets butted at corners.

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04. GENERAL

*** *(please delete "items" not relevant to your specification)*

04.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Cavity brick walls:

System – 3:

Thermal insulation panel system – Cavity brick walls:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed within the brick cavity; giving an insulation value of **R1.8** – heat flow out and heat flow in
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed within the brick cavity; giving an insulation value of **R2.2** – heat flow out and heat flow in

04.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

04.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

05. MATERIALS

05.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10 and 15mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

05.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

06. INSTALLATIONS

06.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Cavity brick walls:

System – 3:

Thermal insulation panel system – Cavity brick walls.

Fixing FOILBOARD over brick ties: Install during construction of the cavity brickwork by running the inner skin of brickwork up at least 1200mm and then push FOILBOARD insulation panel onto the protruding wall ties. Taping holes around the ties secures the insulation panel in position.

Sealing: Butt joins, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

Note: It is best to leave the ‘snots’ of mortar protruding into the cavity, from both skins of brickwork, to locate the FOILBOARD Insulation Panel in the centre of the cavity.

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07. GENERAL

*** *(please delete "items" not relevant to your specification)*

07.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Under timber floors – floor framing saddles:

System – 4A:

Thermal insulation panel system – Under timber floor framing:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed directly to the underside of timber floor framing; giving an insulation value of **R2.2** – heat flow out and **R1.2** – heat flow in
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed directly to the underside of timber floor framing; giving an insulation value of **R2.6** – heat flow out and **R1.3** – heat flow in

07.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

07.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

08. MATERIALS

08.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10 and 15mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

08.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

Aluminium tape for use where FOILBOARD Insulation Panel remains exposed:

Proprietary item: Approved manufacturer's AL500 aluminium silver foil tape.

08.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Floor saddles to timber framing:

Proprietary item: FOILBOARD Floor Saddle plastic insulation retainers. Where located at double joists or wide joists simply cut the saddles in half and fasten with a nail to the side of the timber joist.

09. INSTALLATION

09.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Under timber floors – Floor saddles over timber framing:

System – 4A:

Thermal insulation panel system – Under timber floor framing.

Timing: Installation of insulation is best done after joists are fixed to bearers and before flooring is laid down. It is recommended that for best-fit plumbing rough-in and all other services under the floor are complete.

Fixing FOILBOARD – non-accessible space under floor: Space FOILBOARD Floor Saddles on top of floor joists at approximately 600mm centres; with saddles space at a maximum of 200mm from the ends of the joists. Push the Floor Saddles down so that the specially designed teeth can grip the joist. Cut the FOILBOARD Insulation Panel to size to fit in between joists. Place Insulation panels between joists, resting on the lip of the Floor Saddles. Gently apply pressure to the FOILBOARD Insulation Panels until it clicks into place with the patented lock-in flap design; this will prevent wind from unsettling the Insulation Panels from underneath.

Sealing: Insulation panel shall be taped or silicone sealed where they join and at penetrations, gaps and holes to sealed preventing air infiltration which lowers the “R” value.

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10. GENERAL

*** *(please delete "items" not relevant to your specification)*

10.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Under timber floors – retro fit:

System – 4B:

Thermal insulation panel system – Under timber floor framing:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed directly to the underside of timber floor framing; giving an insulation value of **R3.1** – heat flow out and **R1.3** – heat flow in
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed directly to the underside of timber floor framing; giving an insulation value of **R3.5** – heat flow out and **R1.5** – heat flow in

10.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

10.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

11. MATERIALS

11.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10 and 15mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

11.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

Aluminium tape for use where FOILBOARD Insulation Panel remains exposed:

Proprietary item: Approved manufacturer's AL500 aluminium silver foil tape.

11.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Nail fixing – insulation panel to timber framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with integral galvanised steel nail of sufficient length to suit board thickness.

12. INSTALLATION

12.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Under timber floors – retro fit:

System – 4B:

Thermal insulation panel system – Under timber floor framing.

Fixing FOILBOARD – accessible space under floor: Secure FOILBOARD Insulation Panel to the underside of timber joists with the Foilboard fasteners with integral nails, using 3 fasteners per joist per panel.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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13. GENERAL

*** (please delete "items" not relevant to your specification)

13.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Insulating systems for concrete & masonry wall structures:

System – 5:

Thermal insulation panel system – Internal plasterboard wall linings on **28mm** furring channels fixed to concrete or block work single skin external walls:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.4** – heat flow in and out
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.6** – heat flow in and out
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.8** – heat flow in and out

Thermal insulation panel system – Internal plasterboard wall linings on **16mm** furring channels fixed to concrete or block work single skin external walls:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.3** – heat flow in and out
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.5** – heat flow in and out

13.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

13.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

14. MATERIALS

14.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10, 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

14.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

14.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Furring channel clips for furring channels – insulation board to concrete walls or ceilings:

Proprietary item: BETA-FIX Brackets.

Plastic packer shims for minor alignment: DON DENYER FASTENING SYSTEMS.

Plasterboard or plywood for packing to provide air space: Use off-cuts of plasterboard or plywood.

Furring channels mating with furring channel clips – insulation board to concrete walls or ceilings:

28mm furring channels: RONDO 129 or equivalent.

16mm furring channels: RONDO 308 or equivalent.

15. INSTALLATION

15.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Insulating systems for concrete & masonry wall structures:

System – 5:

Thermal insulation panel system – Internal plasterboard wall linings on furring channels fixed to concrete or block work single skin external walls.

Furring channel clips: Fix clips to concrete or masonry walls using power activated fasteners or masonry anchors. Space clips at a maximum of 1200mm centres along furring channels. Spacing for furring channels shall be a maximum 600mm centres. Pack and shim for alignment.

Fixing FOILBOARD over clips: Push FOILBOARD over clips to retain in position. Insulation Panel can be joined using sealing tape.

Furring channels: Fix furring channels legs into the notches provided in the clips by squeezing the open legs of the furring channels together; all to hold the FOILBOARD tightly in position.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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16. GENERAL

*** *(please delete "items" not relevant to your specification)*

16.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Insulating systems for concrete floor/roof structures:

System – 6:

Thermal insulation panel system – Internal plasterboard ceiling linings on **28mm** furring channels fixed to concrete soffit of suspended slab covering an occupied space:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the soffit of the concrete slab; giving an insulation value of **R1.3** – heat flow out, **R1.7** – heat flow in
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the soffit of the concrete slab; giving an insulation value of **R1.5** – heat flow out, **R1.9** – heat flow in

16.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992 Rigid cellular polystyrene - moulded
AS/NZS 4859-2001 Materials for the thermal insulation of buildings

16.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

17. MATERIALS

17.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

17.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

17.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Furring channel clips for furring channels – insulation board to concrete walls or ceilings:

Proprietary item: BETA-FIX Brackets.

Plastic packer shims for minor alignment: DON DENYER FASTENING SYSTEMS.

Plasterboard or plywood for packing to provide air space: Use off-cuts of plasterboard or plywood.

Furring channels mating with furring channel clips – insulation board to concrete walls or ceilings:

28mm furring channels: RONDO 129 or equivalent.

18. INSTALLATION

18.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Insulating systems for concrete floor/roof structures:

System – 6:

Thermal insulation panel system – Internal plasterboard ceiling linings on furring channels fixed to concrete soffit of suspended slab covering an occupied space.

Furring channel clips: Fix clips to concrete soffit using power activated fasteners or masonry anchors. Space clips at a maximum of 1200mm centres along furring channels. Spacing for furring channels shall be at a maximum 600mm centres. Pack and shim for alignment.

Fixing FOILBOARD over clips: Push FOILBOARD over clips to retain in position. Insulation Panel can be joined using sealing tape.

Furring channels: Fix furring channels legs into the notches provided in the clips by squeezing the open legs of the furring channels together; all to hold the FOILBOARD tightly in position.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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19. GENERAL

*** (please delete "items" not relevant to your specification)

19.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Insulating systems for concrete & masonry wall structures:

System – 7:

Thermal insulation panel system – Internal plasterboard wall linings on **28mm** furring channels fixed to 15mm – 20mm packing over concrete or masonry single skin external walls:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R2.0** – heat flow in and heat flow out
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R2.2** – heat flow in and heat flow out
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R2.3** – heat flow in and heat flow out

Thermal insulation panel system – Internal plasterboard wall linings on **16mm** furring channels fixed to 15mm – 20mm packing over concrete or block work single skin external walls:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R1.9** – heat flow in and heat flow out
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the internal face of the concrete or masonry wall; giving an insulation value of **R2.1** – heat flow in and heat flow out

19.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

19.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

20. MATERIALS

20.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10, 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

20.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

20.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Furring channel clips for furring channels – insulation board to concrete walls or ceilings:

Proprietary item: BETA-FIX Brackets.

Plastic packer shims for minor alignment: DON DENYER FASTENING SYSTEMS.

Plasterboard or plywood for packing to provide air space: Use off-cuts of plasterboard or plywood.

Furring channels mating with furring channel clips – insulation board to concrete walls or ceilings:

28mm furring channels: RONDO 129 or equivalent.

16mm furring channels: RONDO 308 or equivalent.

21. INSTALLATIONS

21.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Insulating systems for concrete & masonry wall structures:

System – 7:

Thermal insulation panel system – Internal plasterboard wall linings on furring channels fixed to 15mm – 20mm packing over concrete or block work single skin external walls:

Packing: Use timber, plasterboard off cuts or plywood to provide a double air space. Fix to concrete or masonry wall together with the furring channel clips.

Furring channel clips: Fix clips over packing to concrete or masonry walls using power activated fasteners or masonry anchors. Space clips at a maximum of 1200mm centres along furring channels. Spacing for furring channels shall be a maximum 600mm centres. Pack and shim for alignment.

Fixing FOILBOARD over clips: Push FOILBOARD over clips to retain in position. Insulation Panel can be joined using sealing tape.

Furring channels: Fix furring channels legs into the notches provided in the clips by squeezing the open legs of the furring channels together; all to hold the FOILBOARD tightly in position.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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22. GENERAL

*** *(please delete "items" not relevant to your specification)*

22.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Insulating systems for concrete roof structures:

System – 8:

Thermal insulation panel system – Internal flush jointed plasterboard linings on **28mm** furring channels fixed to 15mm – 20mm packing under suspended concrete roof:

- Description: 10mm thick anti-glare **FOILBOARD Standard 10** Insulation Panel installed to the soffit of the concrete slab; giving an insulation value of **R1.6** – heat flow out and **R2.0** heat flow in
- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to the soffit of the concrete slab; giving an insulation value of **R1.8** – heat flow out and **R2.2** heat flow in
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to the soffit of the concrete slab; giving an insulation value of **R2.0** – heat flow out and **R2.4** heat flow in

22.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

22.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

23. MATERIALS

23.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10, 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

23.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

23.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Furring channel clips for furring channels – insulation board to concrete walls or ceilings:

Proprietary item: BETA-FIX Brackets.

Plastic packer shims for minor alignment: DON DENYER FASTENING SYSTEMS.

Plasterboard or plywood for packing to provide air space: Use off-cuts of plasterboard or plywood.

Furring channels mating with furring channel clips – insulation board to concrete walls or ceilings:

28mm furring channels: RONDO 129 or equivalent.

24. INSTALLATIONS

24.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Insulating systems for concrete suspended roof structures:

System – 8:

Thermal insulation panel system – Internal plasterboard soffit linings on 28mm furring channels fixed to 15mm – 20mm packing under concrete suspended roof slab.

Packing: Use timber, plasterboard off cuts or plywood to provide a double air space. Fix to concrete or masonry wall together with the furring channel clips.

Furring channel clips: Fix clips over packing to concrete soffit using power activated fasteners or masonry anchors. Space clips at a maximum of 1200mm centres along furring channels. Spacing for furring channels shall be at a maximum 600mm centres. Pack and shim for alignment.

Fixing FOILBOARD over clips: Push FOILBOARD over clips to retain in position. Insulation Panel can be joined using sealing tape.

Furring channels: Fix furring channels legs into the notches provided in the clips by squeezing the open legs of the furring channels together; all to hold the FOILBOARD tightly in position.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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25. GENERAL

*** *(please delete "items" not relevant to your specification)*

25.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Concrete floors:

System – 9:

Thermal insulation panel system – Insulation on 25mm battens under suspended carpeted concrete floor over external unoccupied space (i.e. Car park or raised ground floor slab):

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed to timber battens fixed to the soffit of the concrete slab; giving an insulation value of **R2.6** – heat flow out and **R1.6** – heat flow in
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed to timber battens fixed to the soffit of the concrete slab; giving an insulation value of **R2.8** – heat flow out and **R1.8** – heat flow in

25.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992 Rigid cellular polystyrene - moulded

25.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

26. MATERIALS

26.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 15 and 20mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

26.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

Aluminium tape for use where FOILBOARD Insulation Panel remains exposed:

Proprietary item: Approved manufacturer's AL500 aluminium silver foil tape.

26.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Nail fixing – insulation panel to timber framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with integral galvanised steel nail of sufficient length to suit board thickness.

27. INSTALLATION

27.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Concrete floors:

System – 9:

Thermal insulation panel system – Insulation on 25mm battens under suspended carpeted concrete floor over external unoccupied space.

Timber battens: Secure timber battens to the soffit of the concrete slab using power activated fasteners or masonry anchors. Space battens at 600mm maximum centres.

Fixing: Secure FOILBOARD Insulation Panel to the underside of timber battens with the Foilboard fasteners with integral nails, using 3 fasteners per rafter per panel. Note – where exposed install Insulation Panel with anti-glare side up.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with aluminium tape to prevent air infiltration which lowers the “R” value and provide a better finish.

? Painting plastic fasteners: Use a pressure pack of chrome paint to disguise fasteners where soffit is visible.

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28. GENERAL

*** *(please delete "items" not relevant to your specification)*

28.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Roofs:

System – 10:

Thermal insulation panel system – Cathedral roof with tiles or steel sheeting and lined ceiling:

- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed within the cavity between the roof sheeting on aluminium foil sarking and over ceiling linings having a 25mm minimum air space above and below the insulation panel; giving an insulation value of **R2.3** – heat flow out and **R2.7** – heat flow in
- Description: 25mm thick anti-glare **FOILBOARD Cathedral 25** Insulation Panel installed within the cavity between the roof sheeting on aluminium foil sarking and over ceiling linings having a 25mm minimum air space above and below the insulation panel; giving an insulation value of **R2.5** – heat flow out and **R3.0** – heat flow in

28.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992 Rigid cellular polystyrene - moulded
AS/NZS 4859-2001 Materials for the thermal insulation of buildings

28.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

29. MATERIALS

29.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 20 and 25mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

29.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

Aluminium tape for use where FOILBOARD Insulation Panel remains exposed:

Proprietary item: Approved manufacturer's AL500 aluminium silver foil tape.

30. INSTALLATION

30.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Roofs:

System – 10A:

Thermal insulation panel system – Cathedral roof with tile or steel sheeting and lined ceiling.

Fixing FOILBOARD in roof space: Use off cuts of 25mm thick FOILBOARD to provide a 25mm reflective air space above the ceiling linings. Lay FOILBOARD Insulation Panel over spacers to snugly fit between framing members.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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31. GENERAL

*** *(please delete "items" not relevant to your specification)*

31.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Roofs:

System – 10B:

Thermal insulation panel system – Cathedral roof with tiles or steel sheeting, triple reflective air space and lined ceiling:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed within the ceiling cavity under the roof battens and additionally another layer at least 25mm below the first (upper) layer of insulation panel over ceiling linings and between rafters having a 35mm minimum reflective air space above the top layer and 50mm minimum reflective air space below the bottom layer; giving an insulation value of **R3.2** heat flow out and **R4.0** heat flow in

31.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992	Rigid cellular polystyrene - moulded
AS/NZS 4859-2001	Materials for the thermal insulation of buildings

31.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

32. MATERIALS

32.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 15mm thickness.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

32.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

32.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Nail fixing – insulation panel to timber framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with integral zinc plated annular ring steel nail of sufficient length to suit board thickness.

or

Screw fixing – insulation panel to steel framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with separate zinc plated steel screws of sufficient gauge and length to suit board thickness.

33. INSTALLATIONS

33.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Roofs:

System – 10B:

Thermal insulation panel system – Cathedral roof with tiles or steel sheeting with triple air space and lined ceiling.

Fixing upper layer of FOILBOARD in roof space: Nail or screw fix FOILBOARD Insulation panel to the underside of the roof battens to provide a minimum 35mm reflective air space between the roof sarking and the insulation panel.

Fixing second layer of FOILBOARD in roof space: Use off cuts of two layers of 25mm thick FOILBOARD to provide a 50mm reflective air space above the ceiling linings. Lay FOILBOARD Insulation Panel over spacers to snugly fit between rafters.

Sealing: Butt joins, penetrations, gaps and holes can be sealed with tape to prevent air infiltration which lowers the “R” value.

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34. GENERAL

*** *(please delete "items" not relevant to your specification)*

34.01. SCOPE OF WORK "FOILBOARD" FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

General:

Extent: The following insulation work is included in this specification section:

Roofs:

System – 11:

Thermal insulation panel system – Insulation Panel ceiling lining to factory or shed steel roofing:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed directly to the underside of roof framing below roof sheeting on aluminium foil sarking; giving an insulation value of **R1.5** – heat flow out and **R3.0** – heat flow in
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed directly to the underside of roof framing below roof sheeting on aluminium foil sarking; giving an insulation value of **R1.7** – heat flow out and **R3.5** – heat flow in
- Description: 25mm thick anti-glare **FOILBOARD Cathedral 25** Insulation Panel installed directly to the underside of roof framing below roof sheeting on aluminium foil sarking; giving an insulation value of **R1.9** – heat flow out and **R4.0** – heat flow in

Walls:

System – 11:

Thermal insulation panel system – Insulation Panel wall lining to factory or shed steel wall cladding:

- Description: 15mm thick anti-glare **FOILBOARD Super 15** Insulation Panel installed directly to the underside of roof framing below roof sheeting on aluminium foil sarking; giving an insulation value of **R1.2** – heat flow out and **R1.2** – heat flow in
- Description: 20mm thick anti-glare **FOILBOARD Ultra 20** Insulation Panel installed directly to the underside of roof framing below roof sheeting on aluminium foil sarking; giving an insulation value of **R1.6** – heat flow out and **R1.6** – heat flow in

34.02. STANDARDS – INSULATION

General:

Included: The following standards and codes are applicable to the Works included in this Section, and unless otherwise described in this Specification shall be regarded as describing the minimum standard of materials and workmanship to be provided.

AS 1366.3-1992 Rigid cellular polystyrene - moulded
AS/NZS 4859-2001 Materials for the thermal insulation of buildings

34.03. INSPECTIONS – INSULATION

Witness points:

Notice: Give sufficient notice so that inspection may be made of the following:

- Building framing or substrates prior to installing insulation.
- On completion of installing insulation and prior to insulation being covered up or concealed.

35. MATERIALS

35.01. “FOILBOARD” INSULATION PANEL – INSULATION

Description:

Proprietary item: FOILBOARD Insulation Panel.

Panel size: 2440 x 1200mm.

Edges: Square cut.

Standard: Manufactured to comply with AS/NZS 4859-2001.

Insulation panel: Aluminium foil bonded to a moulded polystyrene core.

Aluminium foil: 20 micron thick material, having the following properties:

- Non-laminated construction.
- One side of insulation panel to have the foil coated with a green anti-glare coating of emissivity not greater than 0.2, and having 100 x 100mm cutting guide lines and the manufacturers' brand name.
- The second side shall be bright reflective aluminium of emissivity less than 0.03.

Polystyrene core: Complying with AS 1366.3-1992, manufactured in 10, 15 and 25mm thicknesses.

Adhesive bonding of the foil to the polystyrene core: Heat resistant type able to sustain a temperature of 100°C without causing delaminating of the aluminium foil from the polystyrene core of the insulation panel.

35.02. “FOILBOARD” SEALING TAPE – INSULATION

General installations:

Proprietary item: TESTA Brown Acrylic High Temperature Tape – Code 60653.

Aluminium tape for use where FOILBOARD Insulation Panel remains exposed:

Proprietary item: Approved manufacturer's AL500 aluminium silver foil tape.

35.03. “FOILBOARD” FIXINGS & ACCESSORIES – INSULATION

Nail fixing – insulation panel to timber framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with integral galvanised steel nail of sufficient length to suit board thickness.

or

Screw fixing – insulation panel to steel framing:

Proprietary item: FOILBOARD plastic rectangular fasteners with separate zinc plated steel screws of sufficient gauge and length to suit board thickness.

36. INSTALLATIONS

36.01. FIXING OF “FOILBOARD” FOIL FACED INSULATION PANEL SYSTEMS – INSULATION

Roofs and walls:

System – 11:

Thermal insulation panel system – Ceiling and wall linings to factory roof and/or walls with steel sheeting.

Note: Timber battens, of minimum size of 70 x 19mm, F7 Radiata Pine are to be provided under edges of FOILBOARD Insulation Panel and mid-way; i.e. at 600mm maximum centres.

Fixing: Secure FOILBOARD Insulation Panel to the underside of timber roof framing with the Foilboard fasteners with integral nails, using 3 fasteners per rafter per panel. Note – install insulation panel with anti-glare side up.

or

Fixing: Secure FOILBOARD Insulation Panel to steel framing with the Foilboard fasteners and screw gun, using 3 fasteners per stud per panel.

Sealing: Butt joints, penetrations, gaps and holes can be sealed with aluminium tape to prevent air infiltration which lowers the “R” value and to provide a better finish.

? Painting plastic fasteners: Use a pressure pack of chrome paint to disguise fasteners.