

0428P DELTA PANELS INSULATED ROOFING SYSTEMS

Branded worksection

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Worksection abstract

This branded worksection *Template* is applicable to roof coverings using DELTA PANELS insulated roofing systems, and roof plumbing.

Guidance text

All text within these boxes is provided as guidance for developing this worksection and should not form part of the final specification. This *Guidance* text may be hidden or deleted from the document using the hidden text *Hide* and *Delete* functions of your word processing system. For additional information visit FAQs at www.natspec.com.au.

Optional style text

Text in this font (blue with a grey background) covers items specified less frequently. It is provided for incorporation into *Normal* style text where it is applicable to a project.

Related material located elsewhere in NATSPEC

If a listed worksection is not part of your subscription package and you wish to purchase it, contact NATSPEC.

Related material may be found in other worksections. See for example:

- 0193 *Building access safety systems*.
- 0411 *Waterproofing – external and tanking* for membrane roofs.
- 0423 *Roofing – profiled sheet metal*.
- 0424 *Roofing – seamed sheet metal*.
- 0437p *DELTA PANELS insulated cladding systems*.
- 0762p *DELTA PANELS in cool rooms*.
- 0802 *Hydraulic design and install* for stormwater and rainwater storage systems.
- 0933 *Power generation – photovoltaic* for integrated rooftop solar PV panels. Contact DELTA to make sure the roofing system is suitable for PV integration.

Material not provided by DELTA PANELS

This branded worksection *Template* includes generic material which may not be provided by the Product Partner including:

- Some roof plumbing products.
- Roof hatches.
- Roof windows.
- Roof ventilators.

Documenting this and related work

You may document this and related work as follows:

- Locate the extent of roofing types, accessories, and finishes on drawings to your office documentation policy.
- Show on the drawings the arrangement of the rainwater plumbing system, including the type and size of the main components (gutters, downpipes, sumps, rainheads, etc.) and the size and spacing of supports and fixings. In high wind areas, consider the degree of exposure of gutters and downpipes and the need to provide additional fixings.
- If documenting stormwater disposal, rainwater tank and related products, use 0802 *Hydraulic design and install*.
- If documenting electric fan powered roof ventilators, document the necessary electrical connection in 0902 *Electrical design and install*.
- Where insulation is required for internal downpipes, document in 0471 *Thermal insulation and pliable membranes* or show on drawings.
- If required, state the minimum added thermal resistance (R-Value) (m² K/W). See NATSPEC TECHnote DES 031 for information on specifying R-Values.
- Check lead time for imported selections and consider adding a requirement, in **SUBMISSIONS**, for the builder to verify availability.

- Document bushfire protection to conform to AS 3959 and the NCC. See NATSPEC TECHnote DES 018 for information on bushfire protection.
- For guidelines on the design of roofs in snow areas, see AS/NZS 1170.3 and SA HB 106.
- For information on air moisture and condensation, see NATSPEC TECHnote DES 004.

The *Normal* style text of this worksection may refer to items as being documented elsewhere in the contract documentation. Make sure they are documented.

Search acumen.architecture.com.au, the Australian Institute of Architects' practice advisory subscription service, for notes on the following:

- Guarantees and warranties.
- Birds and buildings.

Specifying ESD

Green Star: DELTA PANELS insulated panels may contribute to the overall Green Star rating for a building in categories such as Energy, Material, and Emissions.

The following may be specified by retaining default text:

- Roof windows.

The following may be specified using included options:

- Rainwater tanks. See NATSPEC TECHnote DES 011 on rainwater harvesting.

The following may be specified by including additional text:

- High performance roofing systems to extend building service life.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

DELTA PANELS is a 100% Australian owned and operated manufacturer of insulated panels. Its range of products includes roof, wall and patio systems, plus a wide range of accessories. The range of panels, in various styles and colours, has been engineered for enhanced performance in Australia's harsh environment.

1.1 RESPONSIBILITIES

General

Requirement: Provide DELTA PANELS insulated panel roofing systems and associated work, as documented.

Documented is defined in 0171 *General requirements* as meaning contained in the contract documents.

The responsibility of the designer is to make sure the roofing system and associated work is as follows:

- Appropriate for the roof application.
- Designed in conformance with the DELTA PANELS construction details.
- Deals with vapour pressure, condensation, corrosion and thermal movement.
- Remains intact and weathertight under the local or regional ambient climatic conditions.
- Protects people, property and the environment from the adverse effects of stormwater.
- Supports the documented imposed loads and types of roof access without impairment of performance.

If required, state the minimum added thermal resistance (R-Value) (m² K/W).

See NATSPEC TECHnote DES 031 for information on specifying R-Values.

1.2 COMPANY CONTACTS

DELTA PANELS technical contacts

Website: www.deltapanel.com.au/contact.

1.3 CROSS REFERENCES

General

Requirement: Conform to the following:

- 0171 *General requirements*.

0171 *General requirements* contains umbrella requirements for all building and services worksections.

List the worksections cross referenced by this worksection. 0171 General requirements references the 018 Common requirements subgroup of worksections. It is not necessary to repeat them here. However, you may also wish to direct the contractor to other worksections where there may be work that is closely associated with this work.

NATSPEC uses generic worksection titles, whether or not there are branded equivalents. If you use a branded worksection, change the cross reference here.

1.4 MANUFACTURER'S DOCUMENTS

Technical manuals

Roofing panel and system product range: www.deltapanel.com.au/architectural-panels.

Resource centre: www.deltapanel.com.au/engineering

Technical services: www.deltapanel.com.au/handling-installation

1.5 INTERPRETATION

Abbreviations

General: For the purposes of this worksection the following abbreviations apply:

- EPS-FR: Fire retardant expanded polystyrene.
- PIR: Polyisocyanurate thermoset plastic.
- FM: Factory Mutual.
- RC/PIR: Rigid cellular polyisocyanurate.

Edit the **Abbreviations** subclause to suit the project or delete if not required. List alphabetically.

1.6 TOLERANCES

Permitted deviations

Requirement: To DELTA PANELS' recommendations.

Structural steelwork: For DELTA PANEL roofing system: ± 5 mm between bearing planes of adjacent supports.

Supporting members: To AS 1562.1 clause 4.2.3.

1.7 SUBMISSIONS

Edit the **SUBMISSIONS** clause to suit project requirements.

Fire performance

Fire hazard properties: Submit evidence of conformance to PRODUCTS, **FIRE PERFORMANCE**, Fire hazard properties.

Operation and maintenance manuals

On completion: Submit a manual of recommendations from DELTA PANELS for annual maintenance of the roofing system, including recommended methods of access, inspection, cleaning, repair and replacement.

Products and materials

Type tests: As appropriate for the project, submit evidence of conformance to the following:

- Metal roofing generally: Roof sheeting and fastenings to AS 1562.1 clause 5.4 for resistance to concentrated load and AS 1562.1 clause 5.5 for resistance to wind pressure.
- Metal roofing in cyclonic regions to AS/NZS 1170.2: Roof sheeting and fastenings to AS 1562.1 clause 5.6.
- Plastic sheet roofing: Roof sheeting and fastenings to AS 1562.3 Section 5 for resistance to wind forces and resistance to impact.

Type tests are carried out off-site. However, submission of evidence of a successful type test may be called up here for requirements specified in **SELECTIONS** or **PRODUCTS**, if there are no **SELECTIONS**.

Samples

Approved samples which define acceptable limits of colour and texture variations are retained on site. If particular or additional samples are required, e.g. samples for testing, list them here.

Requirement: Submit samples of the following:

- Custom profiled flashings and cappings.
- Sheet metal finishes showing the range of variation available.

- Sealants.
- Trims and accessories with a colour finish.

Shop drawings

Shop drawings are necessary if some or all of the system is to be designed by the contractor or a specialist subcontractor to meet the performance criteria specified. If this is not the case, delete **Shop drawings**.

General: Submit shop drawings to a scale that best describes the detail, showing the following:

- [complete/delete]

e.g. Methods of fixing, required end and side laps, acoustic insulation, suppression of impact noise, provisions for thermal movement, flashing, ridge cappings, roof water disposal, control joint treatment, isolation of incompatible metals, access for maintenance, provision for traffic.

Subcontractors

General: Submit names and contact details of proposed DELTA PANELS' approved installer.

Tests

0171 General requirements covers tests in **Definitions** and calls for an inspection and testing plan under **SUBMISSIONS, Tests**.

Site tests: Submit results as follows:

- Internal downpipe hydrostatic testing: [complete/delete]

Detail the tests required in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.

Warranties

Roofing materials: Submit the manufacturer's product warranties.

Workmanship: Submit a warranty on the installation of the roofing system.

Describe the requirement of warranties in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here.

1.8 INSPECTION

Notice

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

- Roof supports.
- The parts of the roofing and roof plumbing installation before covering up or concealing.

Amend to suit the project, adding critical stage inspections agreed in advance with DELTA PANELS, as required.

Hold points, if required, should be inserted here.

2 PRODUCTS

2.1 GENERAL

Product substitution

Other products: Conform to **PRODUCTS, GENERAL, Substitutions** in 0171 General requirements.

The 0171 General requirements clause sets out the submissions required if the contractor proposes alternative products. Refer also to NATSPEC TECHnote GEN 006 for more information on proprietary specification.

Storage and handling

Storage and handling: To the manufacturer's recommendations and the following:

- Sealed, unopened packaging on a slightly sloped surface to prevent ponding on panel faces.
- Keep dry and unexposed to weather, including direct sunlight.
- Protect materials including edges and surfaces from damage.
- Do not drag metal sheets or panels across each other or over other materials.
- Lift panels vertically when separating off packs.

Storage area conditions: Allocate a safe and free trade area.

Product identification

General: Marked to show the following:

- Manufacturer's identification.
- Product brand name.

- Product type.
- Quantity.
- Product reference code and batch number.
- Date of manufacture.

Edit the list to suit the project or delete if not required.

See DELTA PANELS website for fire performance test reports.

Fire hazard properties

Insulation materials: Tested to AS/NZS 1530.3. Fire hazard indices as follows:

See NATSPEC TECHnote DES 003 for more information on the fire hazard properties of insulation materials and NATSPEC TECHnote DES 020 on fire behaviour of building materials and assemblies. See also BCA Spec C1.10 Table 4. DELTA PANELS insulated panels with EPS and PIR cores, with a nominal thickness of 100 mm tested to AS/NZS 1530.3 have the following indices:

- Ignitability index: 0.
- Spread-of-Flame Index: 0.
- Heat Evolved Index: 0.
- Smoke Developed Index: 2 for EPS, 3 for PIR.

- Spread-of-Flame Index: ≤ 9 .
- Smoke-Developed Index: ≤ 8 if Spread-of-Flame Index > 5 .

Materials with reflective facing: Test to AS/NZS 1530.3 and the recommendations of Appendix A6.

AS/NZS 1530.3 Informative Appendix clause A6 recommends that reflective surfaces of test specimens (which would otherwise generally pass this test) be blackened and diagonally scored in order to simulate soot deposition onto reflective surfaces in a real fire situation. Note that AS/NZS 1530.3 clause 4.12.2(c) requires insulation materials faced with reflective surface materials to incorporate a representative vertical joint in three test specimens.

2.2 DELTA PANELS ANCILLIARIES

Contact **DELTA PANELS Technical services** for the number of fixings required at each location as these are project specific and determined by the project specific wind loads.

To conform to local and cyclonic wind load requirements, and those of FM Approvals certification, it may be necessary to provide additional fasteners in areas of high local suction.

For fastener recommendations for cyclonic applications, contact **DELTA PANELS Technical services** for advice and testing documentation. Recommended fasteners are available from recognised distributors.

DeltaTrim

Receiver channel:

- Folded steel channel sized to suit panel profile and thickness.

Apron flashing:

- Folded steel flashing to suit adjoining angled roofs.

Barge capping:

- Folded steel barge capping with drip guard, sized to suit panel profile and thickness.

Rear barge:

- Folded steel rear barge capping.

Fascia flashing:

- Folded steel flashing for gutter.

Ridge cap:

- Folded steel ridge cap.

DELTA PANELS skylight

Profiled translucent PVC extrusion: 150 mm wide.

Highline gutter

Gutter brackets: Match roof profile.

Profiled fillers

Type: Purpose-made closed cell polyethylene foam profiled to match the roofing panel profile.

Location: Provide profiled fillers, under flashings and to close off corrugation cavities from the inside and outside of the building, to the following:

- Ridges.
- Eaves.
- Steps in roof panelling.

Add locations as required.

Colour: Black.

2.3 DELTA PANELS INSULATED ROOFING SYSTEMS

Standards

Design, installation and materials: To AS 1562.1.

AS 1562.1 requires steel conform to AS 1397 for continuously hot-dipped metallic-coated sheet and strip or AS/NZS 2728 for prepainted and organic film/metal laminate products.

Polyisocyanurate (rigid cellular RC/PIR) core: To AS 1366.2.

DeltaCorroCorro-EPS-FR

DeltaCorroCorro-EPS-FR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, bonded to a fire retardant grade expanded polystyrene insulating core. Both steel skins have a corrugated profile.

Description: A screw fixed, interlocking panel system of pre-finished corrugated steel sheets with a fire retardant EPS insulation core.

DeltaCorroCorro-PIR

DeltaCorroCorro-PIR is a FM approved insulated roof panel system, comprising two pre-painted, roll-formed steel skins, with a polyisocyanurate core. Both steel skins have a corrugated profile.

Description: A screw fixed, interlocking panel system of pre-finished corrugated steel sheets with a PIR insulation core.

DeltaOrb-EPS-FR

DeltaOrb-EPS-FR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, bonded to a fire retardant grade expanded polystyrene insulating core. The top steel skin has a corrugated profile and the bottom skin is flat.

Description: A screw fixed, interlocking panel system of pre-finished corrugated and flat steel sheets with a fire retardant EPS insulation core.

DeltaOrb-PIR

DeltaOrb-PIR is a FM approved insulated roof panel system, comprising two pre-painted, roll-formed steel skins, with a polyisocyanurate core. The top steel skin has a corrugated profile and the bottom skin is flat.

Description: A screw, fixed, interlocking panel system of pre-finished corrugated and flat steel sheets with a PIR insulation core.

DeltaTrimCorro-EPS-FR

DeltaTrimCorro-EPS-FR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, bonded to a fire retardant grade expanded polystyrene insulating core. The top steel skin has a trapezoidal profile and the bottom skin is corrugated.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal and corrugated steel sheets with a fire retardant EPS insulation core.

DeltaTrimCorro-PIR

DeltaTrimCorro-PIR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, with a polyisocyanurate core. The top steel skin has a trapezoidal profile and the bottom skin is corrugated.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal and corrugated steel sheets with a PIR insulation core.

DeltaTrim-EPS-FR

DeltaTrim-EPS-FR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, bonded to a fire retardant grade expanded polystyrene insulating core. The top steel skin has a trapezoidal profile and the bottom skin is flat.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal and flat steel sheets with a fire retardant EPS insulation core.

DeltaTrim-PIR

DeltaTrim-PIR is a FM approved insulated roof panel system, comprising two pre-painted, roll-formed steel skins, with a polyisocyanurate core. The top steel skin has a trapezoidal profile and the bottom skin is flat.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal and flat steel sheets with a PIR insulation core.

DeltaTrimTrim-EPS-FR

DeltaTrimTrim-EPS-FR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, bonded to a fire retardant grade expanded polystyrene insulating core. Both steel skins have a trapezoidal profile.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal steel sheets with a fire retardant EPS insulation core.

DeltaTrimTrim-PIR

DeltaTrimTrim-PIR is an insulated roof panel system, comprising two pre-painted, roll-formed steel skins, with a polyisocyanurate core. Both steel skins have a trapezoidal profile.

Description: A screw fixed, interlocking panel system of pre-finished trapezoidal steel sheets with a PIR insulation core.

2.4 ROOF PLUMBING**General**

Standard: To AS/NZS 3500.3.

Requirement: Flashings, cappings, gutters, rainwater heads, outlets and downpipes necessary to complete the roof system.

Materials

Metal rainwater goods: To AS/NZS 2179.1.

Minimum coating class, thickness and grade for commonly used materials are given in AS/NZS 2179.1 (for gutters, downpipes, rainheads) and AS/NZS 2904 (for flashings). See AS 1397 Appendix D for information and guidance on the selection of steel grades and coating classes.

PVC-U rainwater goods and accessories: To AS/NZS 3500.3.

For plastic rainwater goods, document by proprietary brand names.

Flashings and cappings

See SA HB 39 Section 8 for recommended practice for metal flashing and cappings. Flashing materials include metallic-coated steel, soft zinc, lead, copper, aluminium annealed sheet, bitumen (or polyethylene) coated aluminium, stainless steel, PVC, butyl rubber and neoprene rubber. Lead is not compatible with aluminium or aluminium/zinc coated steel. For malleable flashings, consider soft zinc or plastic sheet. Document proprietary profiles as proprietary items and special profiles on drawings. If sizes are not shown on the drawings document here.

Standard: To AS/NZS 2904.

Flashing and capping types: DELTA PANELS' external prefabricated flashings to match insulated panel coating.

Minimum 0.5 mm coated steel to AS 1397 to match external coating thickness of the insulated panel.

Material and colour: Match roof panel top sheeting.

Ridge and barge cappings

Capping types: External prefabricated cappings to match insulated panel coating.

Material and colour: Match roof panel top sheeting.

Gutters

See SA HB 39 Section 5 for recommended practice for metal rainwater drainage. See AS/NZS 3500.3 Section 3 for method of sizing gutters and downpipes and SA HB 114 for worked examples. See AS/NZS 3500.3 clause 4.9 for support systems of roof drainage systems. Show particular requirements, if any, on the drawings. Show on the drawings the location of gutters, box gutters, overflows, valley gutters, rainwater heads and sumps. In high wind areas consider the degree of exposure of gutters and downpipes to wind actions and the need to provide additional fixings.

Eaves gutter: Highline gutter.

Lightweight pre-coated steel guttering, available in lengths up to 6 m and supplied in a corrosion-resistant range of finishes.

- Colour: Match roof panelling.

Valley and parapet gutters: As documented.

Box gutters laid to falls: As documented.

2.5 ROOF WINDOWS

General

Standard: To AS 4285.

Description: A proprietary window system designed for non-vertical installation in roofs pitched between 15° and 85°, consisting of the following:

- Timber frame and sash, shop clear primed or prefinished.
- External anodised aluminium protective profiles.
- Sealed double glazing.
- Horizontally pivoted sash, 180° reversible, on patent friction hinges.
- Opening and locking by patent control bar.
- Ventilation flap.

3 EXECUTION

3.1 INSTALLATION

Protection

General: Keep the roofing and rainwater system free of debris and loose material during construction.

Metal separation

Make sure of compatibility or detail separation.

See AS 1562.1 Appendix C Table C3 for guidance on the compatibility of metals. See also SA HB 39 Section 2 on material selection. It is primarily a design responsibility that incompatible metals are not documented or shown to be in contact. Preferably show the separation method on the drawings.

Corrosion can result from water run-off between incompatible surfaces. See AS 1562.1 clause 3.4.3 and AS 1562.1 Appendix C Table C4. There are two conditions to be avoided:

- Run-off from copper and copper alloys onto aluminium, zinc, galvanized, or aluminium/zinc-coated surfaces.
- Run-off from inert catchment surfaces such as glazed terracotta, prepainted steel, aluminium and aluminium/zinc onto galvanized surfaces.

In marine or high humidity environments, separate green hardwood from aluminium and coated steel.

Typical methods for metal separation include:

- Applying an anti-corrosion, low moisture transmission coating such as zinc or barium chromate primer or aluminium pigmented bituminous paint to contact surfaces.
- Inserting a separation layer such as polyethylene film, adhesive tape or bituminous felt.

Requirement: Prevent direct contact between incompatible metals, and between green hardwood or chemically treated timber and aluminium or coated steel, by one of the following methods:

- Applying an anti-corrosion, low moisture transmission coating to contact surfaces.
- Inserting a separation layer.

3.2 DELTA PANELS INSULATED ROOFING SYSTEM

Installation

Requirement: To DELTA PANELS' recommendations using DELTA PANELS' approved installers for installation, including the following:

- Fasteners, laps, sealants and fillers: Install, as documented.
- Site cut panels:
 - Provide accurate, true lines with no distortion.
 - Cut with a suitable metal cutting circular type saw and treat exposed edges with a suitable edge protection lacquer.
 - Cut openings to the minimum size necessary.
 - Penetrations larger than 300 mm x 250 mm: Provide additional structural support.

Refer to the DELTA Panels and Roofing, Handling and Installation Manual regarding handling, installation and cutting of panels.

Swarf: Remove swarf and other debris as soon as it is deposited.

Accessories: Provide material with the same finish as roofing sheets.

3.3 BUILDING ELEMENTS

Ridges and eaves

Sheet ends: Treat as follows:

- Project panel ends with a 75 mm cut back at the eaves.
- Close off ridges with purpose-made ridge fillers of closed cell polyethylene foam.

Refer to DELTA PANELS' standard construction details.

Ridges and barge

Capping: Finish off along ridge and verge lines with purpose-made ridge capping or barge rolls.

Refer to DELTA PANELS' standard construction details.

Flashings (non-cyclonic)

Fixing: Fix at 450 mm centres.

Overlapping: Overlap top sheets.

For cyclonic and non-cyclonic applications, refer to DELTA PANELS' Engineering and Construction manuals for fixing recommendations and documentation.

Profiled fillers

Sealing: Seal the top, bottom and sides of each profile filler with a single line of non-setting gun-grade sealant.

Fixing: Provide a tight fit, without gaps.

Fasteners

DELTA roof panels:

- Standard applications: Locate fasteners through every crown of the profile.
- Additional fixings: Locate in the valley of the panel.

To conform to local and cyclonic wind load requirements, and those of Factory Mutual, it may be necessary to provide additional fasteners in areas of high local suction.

3.4 ROOF PLUMBING

External downpipes

Document the material, profile and size on the drawings or in a schedule.

General: Prefabricate downpipes to the required section and shape where possible. Connect heads to gutter outlets and, if applicable, connect feet to rainwater drains.

Access cover: Provide a removable watertight access cover at the foot of each downpipe stack.

Downpipe support: Provide supports and fixings for downpipes.

3.5 COMPLETION

Reinstatement

Extent: Repair or replace damage to the roofing system. If the work cannot be repaired satisfactorily, replace the whole area affected.

Touch up: To DELTA PANELS' recommendations.

Contact Delta for any further recommendations.

Cleaning

Roofing and rainwater drainage system: Remove excess debris, metal swarf, solder, sealants and unused materials.

Exposed metal surfaces: Clean surfaces of substances that interfere with uniform weathering or oxidation.

Protection: After completion, remove protective coatings using methods to the manufacturer's recommendations.

Protective film will withstand exposure to weather for a limited period of time before losing its peel-off characteristics and causing staining. The gloss coating changes when exposed to plasticizers.

Fasteners: Make sure weather tight and external panel facings are not distorted.

DELTA PANELS roof panels: Clean surfaces to the manufacturer's recommendations.

Roof plumbing: Clean out spoutings, gutters and rainwater pipes after completion of roof installation.

Warranties

Requirement: Provide materials and workmanship warranties as follows:

- Roofing materials: The manufacturer's product warranty.
- Workmanship: Installer's warranty.

Form: Against failure of materials and execution under normal environment and use conditions.

Period: As offered by the supplier/manufacturer.

Use only if warranties extending beyond the defects liability period are available for the particular system. As the warranty is in the form of separate material and installation warranties, the signatures of both manufacturer and installer are required.

The form(s) required should be provided as part of the contract documentation.

DELTA PANELS' standard warranties include paint systems and panel materials. All warranties are project specific and long term product performance can depend on many factors, including the project location, aspect to prevailing winds, proximity to bodies of water (marine or otherwise) and local site factors such as nearby industries or industrial processes.

Warranty periods: Provided the panels are installed to DELTA PANELS' recommendations and engineering specifications, the warranty period is as follows:

- 15 years covering defects caused by the manufacturing process.

4 SELECTIONS

Schedules are a way of documenting a selection of proprietary or generic products or systems by their properties. Indicate their locations here and/or on the drawings. Refer to NATSPEC TECHnote GEN 024 for guidance on using and editing schedules.

4.1 PRODUCT

DELTA PANELS insulated roofing system schedule

Property	A	B	C
Product			
Profile			
Roof pitch			
Internal environment			
Panel width (mm)			
Panel length (m)			
Top sheet thickness (mm)			
Bottom sheet thickness (mm)			
Top sheet: Colour			
Bottom sheet: Colour			
Thickness (mm)			
R-Value (m ² .K/W)			

A, B, C: These designate each instance or type or location of the item scheduled.

Edit codes in the **Schedule** to match those on drawings.

Profile: Select from:

- DeltaCorroCorro.
- DeltaOrb.
- DeltaTrimCorro.
- DeltaTrim.

Roof pitch: If required, document the roof pitch:

- DeltaCorroCorro: 3° minimum.

- DeltaOrb: 3° minimum.
- DeltaTrimCorro: 3° minimum.
- DeltaTrim: 2° minimum.
- DeltaTrimTrim: 2° minimum.

Internal environment: Select Low-humidity or High-humidity. Delete if not required.

Panel width (mm): 1000.

Panel length (mm): Cut to length. Minimum 1800.

Top sheet thickness (mm): 0.42.

Bottom sheet thickness (mm): 0.40 to 0.60.

Top sheet colour: Select from standard colour range.

Bottom sheet colour: Select from standard colour range.

Thickness (mm): Select from:

- DeltaCorroCorro: 75, 100, 125, 150, 175, 200, 225, and 250.
- DeltaOrb: 50, 75, 100, 125, 150, 200, 225, and 250.
- DeltaTrimCorro: 75, 100, 125, 150, 175, 200, 225, and 250.
- DeltaTrim: 50, 75, 100, 125, 150, 200, 225, and 250.
- DeltaTrimTrim: 75, 100, 125, 150, 200, 225, and 250.

R-Value (m².K/W) for thickness (mm): Select from:

- DeltaCorroCorro-EPS-FR: 1.61 (75), 2.26 (100), 2.66 (125), 3.56 (150), 4.10 (175).
- DeltaCorroCorro-PIR: 3.23 (75), 4.31 (100), 5.39 (125), 6.03 (150), 7.54 (175).
- DeltaOrb-EPS-FR: 1.4 (50), 2.1 (75), 2.7 (100), 3.4 (125), 4.1 (150), 5.4 (200), 6.1 (225), and 6.8 (250).
- DeltaOrb-PIR: 2.16 (50), 3.23 (75), 4.31 (100), 5.39 (125), 6.47 (150), 7.54 (175), and 8.62 (200).
- DeltaTrimCorro-EPS-FR: 1.61 (75), 2.26 (100), 2.66 (125), 3.56 (150), 4.10 (175).
- DeltaTrimCorro-PIR: 3.23 (75), 4.31 (100), 5.39 (125), 6.47 (150), and 7.54 (175).
- DeltaTrim-EPS-FR: 1.4 (50), 2.1 (75), 2.7 (100), 3.4 (125), 4.1 (150), 5.4 (200), 6.1 (225), and 6.8 (250).
- DeltaTrim-PIR: 2.16 (50), 3.23 (75), 4.31 (100), 5.39 (125), 6.47 (150), 7.54 (175), and 8.62 (200).
- DeltaTrimTrim-EPS-FR: 1.61 (75), 2.26 (100), 2.66 (125), 3.56 (150), 4.10 (175).
- DeltaTrimTrim-PIR: 2.16 (50), 3.23 (75), 4.31 (100), 5.39 (125), 6.47 (150), and 7.54 (175).

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

AS/NZS 1170		Structural design actions
AS/NZS 1170.2	2011	Wind actions
AS 1366		Rigid cellular plastics sheets for thermal insulation
AS 1366.2	1992	Rigid cellular polyisocyanurate (RC/PIR)
AS 1530		Methods for fire tests on building materials, components and structures
AS/NZS 1530.3	1999	Simultaneous determination of ignitability, flame propagation, heat release and smoke release
AS 1562		Design and installation of sheet roof and wall cladding
AS 1562.1	2018	Metal
AS 1562.3	2006	Plastics
AS/NZS 2179		Specifications for rainwater goods, accessories and fasteners
AS/NZS 2179.1	2014	Metal shape or sheet rainwater goods, and metal accessories and fasteners
AS/NZS 2904	1995	Damp-proof courses and flashings
AS/NZS 3500		Plumbing and drainage
AS/NZS 3500.3	2018	Stormwater drainage
AS 4285	2019	Rooflights

The following documents are mentioned only in the *Guidance* text:

AS/NZS 1170		Structural design actions
AS/NZS 1170.3	2003	Snow and ice actions
AS 1397	2011	Continuous hot-dip metallic coated steel sheet and strip - Coatings of zinc and zinc alloyed with aluminium and magnesium
AS/NZS 2728	2013	Prefinished/prepainted sheet metal products for interior/exterior building applications - Performance requirements
AS 3959	2018	Construction of buildings in bushfire prone areas
SA HB 39	2015	Installation code for metal roof and wall cladding
SA HB 106	1998	Guidelines for design of structures in snow areas
SA HB 114	1998	Guidelines for design of eaves and box gutters
BCA Spec C1.10	2019	Fire resistance - Fire hazard properties
NATSPEC DES 003	2006	Fire hazard properties of insulation and pliable membranes
NATSPEC DES 004	2005	Air, moisture and condensation

NATSPEC DES 011	2007	Rainwater harvesting
NATSPEC DES 018	2008	Bushfire protection
NATSPEC DES 020	2011	Fire behaviour of building materials and assemblies
NATSPEC DES 031	2014	Specifying R-Values
NATSPEC GEN 006	2007	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2019	Specifying ESD