

0429P REVOLUTION ROOFING - GLAZED**Branded worksection**

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Worksection abstract

This branded worksection *Template* is applicable to REVOLUTION ROOFING polycarbonate roof glazing and glazed awning systems.

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:

- 0341 *Structural steelwork.*
- 0342 *Light steel framing for the subframe.*
- 0423p *REVOLUTION ROOFING in profiled sheet metal.*
- 0434p *REVOLUTION ROOFING translucent facade cladding.*
- 0436p *REVOLUTION ROOFING wall cladding.*

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.
- Penetrations: Show on the drawings the location and extent of penetrations for services and structural elements including flashing details.
- Document the structural support system to your office documentation policy.
- Contact REVOLUTION ROOFING for limits of panel length and span tables.

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

- Guarantees and warranties.

Specifying ESD

The following may be specified by including additional text:

- Design for disassembly. REVOLUTION ROOFING panels can be dismantled and reused elsewhere.
- Recycling of construction scrap materials or offcuts. Polycarbonate is 100% recyclable.

Refer to the NATSPEC TECHreport TR 01 on specifying ESD.

1 GENERAL

REVOLUTION ROOFING provides a range of steel and plastic roofing, walling and building products for the Australian domestic, commercial and industrial building industry. Since the opening of Revolution Roofing, our range has grown to include all the latest roofing profiles, gutters, fascias, ridge cappings, valleys, flashings, and verandahs.

1.1 RESPONSIBILITIES**General**

Requirement: Provide the REVOLUTION ROOFING polycarbonate roof glazing system, as documented.

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

Ambient climatic conditions

Design rainfall intensity (mm/h) to AS/NZS 3500.3: [complete/delete]

See AS/NZS 3500.3 Appendix E for selected place references or the Hydrometeorological Advisory Services of the Bureau of Meteorology (HAS) at www.bom.gov.au for rainfall data.

1.2 COMPANY CONTACTS

REVOLUTION ROOFING technical contacts

Website: www.revolutionroofing.com.au/products/polypiu/

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 STANDARDS

General

Design and installation: To AS 1562.3.

The NCC cites AS/NZS 1562.3:1996 for BCA deemed-to-satisfy.

Polycarbonate: To AS 4256.5.

The NCC cites AS/NZS 4256.5:1996 for structural sufficiency of roof construction and weatherproofing of roofing.

1.5 MANUFACTURER'S DOCUMENTS

Technical manuals

Polypiu product details: www.polypiuaustralia.com.au

1.6 INTERPRETATION

Abbreviations

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

- LT%: The percentage of visible light transmission (400 to 700 nm).
- SR%: The percentage of total solar reflection (300 to 2800 nm).
- ST%: The percentage of total solar radiation transmission (300 to 2800 nm).

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

1.7 TOLERANCES

Permitted deviations

Requirement: To REVOLUTION ROOFING's recommendations.

1.8 SUBMISSIONS

Fire hazard properties

Requirement: Submit evidence of conformity to PRODUCTS, FIRE PERFORMANCE, Fire hazard properties.

Fire hazard properties may be documented in **PRODUCTS** and/or **EXECUTION**.

Operations and maintenance manuals

On completion: Submit REVOLUTION ROOFING's recommendations for the maintenance of the roof glazing system including, frequency of inspection and recommended methods of access, inspection, cleaning, repair and replacement.

Samples

Approved samples are retained on site and define the acceptable limits of colour and texture variation.

Finish: Submit samples of the roof glazing material showing the range of variation available.

Sample size: [complete/delete]

Sample sizes are generally 300 x 300 mm or 600 x 600 mm.

Warranties

Requirement: Submit the following:

- Warranty item: [complete/delete]

Describe the requirement of warranties in **PRODUCTS** or **EXECUTION**, as appropriate, and list the submissions required here. e.g. Interlocking warranty for sealant type and application. Warranties for composite panels are project specific.

Translucent roof panel systems: Submit REVOLUTION ROOFING's published product warranties.

1.9 INSPECTION**Notice**

Inspection: Give notice so that the framing and anchor points may be inspected before they are covered up or concealed.

Amend to suit the project, adding critical stage inspections 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

Requirement: Store and handle materials to REVOLUTION ROOFING's recommendations and the following:

- Protect materials, including edges and surfaces from damage.
- Keep dry and unexposed to weather.
- Do not drag sheets across each other or over other materials.
- Sheeting: Stack flat and off the ground on at least 3 evenly placed bearers.

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.

2.2 FIRE PERFORMANCE**Fire hazard properties**

Requirement: Conform to the following, tested to AS/NZS 1530.3.

- Ignitability Index: 0.
- Spread-of-flame Index: 0.
- Heat evolved: 0.
- Smoke-Developed Index: Maximum 5.

Test results for Ignitability, Spread-of-flame, Heat evolved and Smoke-Developed indices are available on request from REVOLUTION ROOFING.

Fire Safety Compliance statements are available from REVOLUTION ROOFING indicating permissible use of PolyPIU products. Not permitted for buildings of Type A and Type B construction as defined in BCA Specification C1.10.

2.3 REVOLUTION ROOFING SYSTEMS

Detail the subframe to your office documentation policy. The subframe is not provided by REVOLUTION ROOFING.

REVOLUTION ROOFING PolyPIU multiwall polycarbonate

System description: Proprietary polycarbonate glazing system comprising multiwall and solid polycarbonate sheets, associated aluminium/polycarbonate connecting profiles and other framing accessories.

3 EXECUTION

3.1 PREPARATION

Substrate tolerance

Industry standards: [complete/delete]

Light steel framing: To NASH-1 Appendix D and NASH-2 Appendix A, cited in *0342 Light steel framing*.

Structural steel: To AS/NZS 5131, cited in the *0341 Structural steelwork*. AS/NZS 5131 Section 12 and Appendix F cover tolerances.

Concrete: To the **Flatness tolerance class table** in either *0310 Concrete – combined* or *0315 Concrete finishes*.

3.2 INSTALLATION

REVOLUTION ROOFING requirements

Cutting and assembly: To the PolyPIU installation manual.

3.3 COMPLETION

Cleaning

General: To cleaning instructions in the PolyPIU installation manual.

Warranties

Type: Limited 10 year warranty.

Conditions: Refer to PolyPIU's published product warranties.

PolyPIU's warranty is limited to resistance to atmospheric events only. i.e. for light transmission and yellowing.

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.

Complete or delete the following subclauses as appropriate for the project.

4.1 REVOLUTION ROOFING MULTIWALL SHEETS

CarboPIU

Description: Multiwall polycarbonate sheet.

Application: Roofing and glazed skylights.

Maximum sheet length: 7 m.

Longer lengths are available to order, subject to lead time.

Installed module width: [complete/delete]

Select from the following widths:

- 1050 mm.
- 2100 mm.

Panel thickness: 10 mm.

Other thicknesses are available on request.

R-Value: 0.4 m².K/W.

Colour: [complete/delete]

Select from the following standard colours:

- Opal.
- Grey.
- Solar Ice.
- Solar Grey.
- Clear.

Other colours are available on request. Consult with REVOLUTION ROOFING for current stock availability and lead times. Refer to REVOLUTION ROOFING for the optical and solar properties, including light transmission (LT%) , ST%, and SR% for each colour.

PanelPIU

Description: Multiwall polycarbonate sheet.

Application: Gable ends and screens.

Maximum sheet lengths: 7 m.

Longer lengths are available on request. Contact Revolution Roofing for technical assistance.

Installed module width: 500 mm.

Panel thickness: [complete/delete]

Select from the following thicknesses:

- 16 mm.
- 20 mm.
- 25 mm.
- 40 mm. For vertical glazing only.

R-Value: [complete/delete]

R-Values for thicknesses are available from REVOLUTION ROOFING.

Colour: [complete/delete]

Select from the following standard colours:

- Opal.
- Clear.

Consult with REVOLUTION ROOFING for current stock availability and lead times. Refer to REVOLUTION ROOFING for the optical and solar properties, including light transmission (LT%) , ST%, SR% and SHGC for each colour.

ReversPIU

Description: Interlocking system of multiwall polycarbonate sheet.

Application: Roofing and glazed skylights.

Maximum panel length: 12 m.

Panel width: 1000 mm.

Panel thickness: 20 mm.

Other sizes are available on request but may be subject to minimum order quantity and longer lead times.

R-Value: 0.76 m².K/W.

R-Values for other thicknesses are available from REVOLUTION ROOFING.

Colour:

Select from the following stocked colours:

- Opal.
- Clear.

Consult with REVOLUTION ROOFING for current stock availability and lead times. Refer to REVOLUTION ROOFING for the optical and solar properties, including light transmission (LT%) , ST%, SR% and SHGC for each colour.

GrecaPIU Rev.5

Description: Multiwall polycarbonate sheet.

Application: Roofing and glazed skylights.

Maximum sheet length: 11.8 m.

Sheet width: 820 mm.

Sheet thickness: 6 mm.

R-Value: 0.21 m².K/W.

Colour: [complete/delete]

Select from the following stocked colours:

- Clear.
- Opal.

Consult with REVOLUTION ROOFING for current stock availability and lead times.

OndaPIU

Description: Multiwall polycarbonate sheet.

Application: Roofing and glazed skylights.

Maximum sheet length: 11.8 m.

Sheet width: 840 mm.

Sheet thickness: 6 mm.

R-Value: 0.30 m².K/W.

Colour: [complete/delete]

Select from the following standard colours:

- Clear.
- Opal.

Consult with REVOLUTION ROOFING for current stock availability and lead times.

SmartPIU

Description: Multiwall polycarbonate sheet.

Application: Roofing and glazed skylights.

Product:

Select from the following SmartPiu sheet products

- SmartPIU Corrugated.
- SmartPIU Rev5.
- SmartPIU Revklip.

Consult with REVOLUTION ROOFING for current stock availability and lead times.

Maximum sheet length: 11.8 m.

Sheet width: [complete/delete]

Consult with REVOLUTION ROOFING for product sheet widths.

Sheet thickness: 2.5 mm.

R-Value: 0.21 m².K/W.

Colour: [complete/delete]

Select from the following standard colours:

- Clear.
- Opal.

Consult with REVOLUTION ROOFING for current stock availability and lead times.

4.2 REVOLUTION ROOFING SOLID SHEETS

LightPIU Corrugated

Description: A corrugated solid polycarbonate sheet.

Application: Residential roofing, verandahs, canopies and awnings.

Maximum sheet length: 11.8 m.

Sheet width: 840 mm.

Sheet thickness: 0.8 mm.

R-Value: 0.175 m².K/W.

Colour: [complete/delete]

Select from the following standard colours:

- Opal.
- Clear.
- Grey.
- Solar Ice.
- Solar Grey.

Consult with REVOLUTION ROOFING for current stock availability and lead times. Refer to REVOLUTION ROOFING for the optical and solar properties, including light transmission (LT%) , ST%, SR% and SHGC for each colour.

4.3 SUPPORT SYSTEM

System components

Accessories: [complete/delete]

Select from the following:

- Aluminium bars and profiles.
- Aluminium brackets.
- Rubber gaskets.
- Fastening clamps.
- Aluminium joining channels.
- Polycarbonate joining channels.
- Polycarbonate Caps.
- Polycarbonate side profiles.
- Polycarbonate step breaking profiles.

Fasteners: [complete/delete]

Determine the fastener types and centres by the spanning capability of the sheets panels and connectors specified, to REVOLUTION ROOFING's technical handbook.

REFERENCED DOCUMENTS

The following documents are incorporated into this worksection by reference:

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 1562.3	2006	Plastics
AS/NZS 3500		Plumbing and drainage
AS/NZS 3500.3	2018	Stormwater drainage
AS 4256		Plastic roof and wall cladding materials
AS 4256.5	2006	Polycarbonate

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

AS 1562		Design and installation of sheet roof and wall cladding
AS/NZS 1562.3	1996	Plastic
AS 4256		Plastic roof and wall cladding materials
AS/NZS 4256.5	1996	Polycarbonate
AS/NZS 5131	2016	Structural steelwork - Fabrication and erection
NASH		NASH Standard Residential and Low-rise Steel Framing
NASH-1	2005	Design criteria
NASH-2	2014	Design solutions
NATSPEC GEN 006	2015	Product specifying and substitution
NATSPEC GEN 024	2015	Using NATSPEC selections schedules
NATSPEC TR 01	2019	Specifying ESD