

Astro Snap Lock Roof System Architectural Specifications

1 General

1.1 Name and Description

Astro Snap Lock Roof

Astro Snap Lock Roof Trays are for use on residential and commercial roof, wall and mansard applications.

Seam Height:	38 mm
Tray Length:	custom cut lengths from 1000 mm
Module Widths:	
▪ Aluminium:	483mm
▪ Copper:	553 mm, 600 mm, 683 mm
▪ 445m2Steel:	483 mm
Weight/m ²	
▪ 0.7 mm Aluminium:	1.89 kg
▪ 0.6 mm Copper:	6.24 kg
▪ 0.4 mm Steel:	9.81 kg

1.2 Manufacturer

Architectural Seam Tech Roofing Pty Ltd
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Hornsby NSW 2077
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1.3 Scope

- The scope of work includes, but is not limited to, the installation of all preformed roof trays, stainless steel clips, pre-formed flashings and pre-formed accessories such as miscellaneous flashings and attaching devices as well as sealant.

2 Product

2.1 Materials

- 0.7 mm Aluminium: All pre-formed panels, including pre-formed accessories and flashings and matching coilstock are made of Alcan Falzonal Aluminium alloy AlMn 1Mg 0.5 to EN 573/EN 1396, lock/welt quality H41 with a yield point of $R_p 0.2 > 100 \text{ N/mm}^2$ and a tensile strength of $R_m 130-170 \text{ N/mm}^2$.

- 0.6 mm Copper: All pre-formed panels, including pre-formed accessories and flashings and matching coilstock are made of KME Copper Cu-DHP. Cu-DHP is oxygen-free phosphorus-deoxidised copper with a limited high residual phosphorous content. The purity level amounts to at least 99.90%. The material has a yield point of $R_p 0.2 > 180-235 \text{ N/mm}^2$ and a tensile strength of $R_m 255 - 285 \text{ N/mm}^2$.
- 0.4 mm Stainless Steel: All pre-formed panels, including pre-formed accessories and flashings and matching coilstock are made of Grade 445m² stainless steel. 445m² will give corrosion performance superior to the austenitic grade 316. the typical chemical composition is C 0.01, Cr 22.1, Mo 1.20, Nb 0.23, Ti 0.19, Al 0.09. The material has a yield stress of 385 Mpa and 535 Mpa tensile strength.
- 0.4 mm painted steel: as per Colorbond specifications

2.2 Finish

- 0.7 mm Aluminium: Astro panels are coated with a baked-on protective primer and PVDF (polyvinylidene fluoride) top coat to provide a high quality finish. The backs of the panels are finished with a protective clear coat.
- 0.6 mm Copper: Astro panels are produced in their classic, bright rolled form. The surface will slowly develop the patina typical of copper when exposed to the atmosphere.
- 0.4 mm Stainless Steel: Low reflective surface finish (2DR), produced by skin pass rolling the strip with shot blasted rolls.

2.3 Additional Materials

Other materials available from the manufacturer include matching sealant tape, stainless steel fixing clips and matching rainwater goods.

3 Installation

3.1 Pitch

Astro Roof trays are designed for installations on roofs with a 1.5 Deg. or greater pitch.

3.2 Decking

The trays are applied over minimum 12 mm plywood decking, supporting roof traffic or 450 mm spaced top hat sections.

3.3 Underlayment

The entire roof must be covered with a layer of a non-metallic sarking or shelter seal.

3.4 Roof trays

The roof trays are available in custom widths and lengths, limited to the maximum module widths as described under 1.1. Roof trays with up to 6000 mm length are rollformed at the manufacturers premises, packed in crates and delivered to the building site. Roof trays over 6000 mm in length will be rollformed on-site.

3.5 Eave seam termination

The roof trays can be ordered with pre-formed eave seam terminations. Alternatively, the eave seam termination can be made on-site with a bending tool, once the roof trays are fixed onto the substructure

3.6 Dog-eared upstands, cross to seam

The roof trays can be ordered with pre-formed upstands. Alternatively, the upstands can be made on-site with a bending tool.

3.7 Tapered Roof sheets

Pan width reduced at one end. Available in custom pre-cut tapered rollformed roof sheets.

4 System

Astro roof trays are rollformed from coils and is available various metals. The standard tray consists of a flat pan with an overlap and an underlap of 37 mm height. The trays are fixed with concealed clips, spaced at 450 mm centres at edge and corner areas and 600 mm centres in the centre roof area. The spacing may vary by the serviceability and strength limit states for particular projects. The clips are fixed onto the substructure with 2 screws each. There are no holes to penetrate the sheet. The underlap slides along the clip allowing for thermal contraction and expansion. The overlap of the adjacent roof sheet snap locks into the underlap and will be fixed in the same manner.

The versatile system allows for variations in lengths and widths, right-hand and left-hand adaptor panels and adaptor panels with two underlaps or two overlaps.

5 Dissimilar materials

Aluminium, Copper and Stainless Steel materials should not be installed in contact with dissimilar metals, concrete, stucco, asbestos siding, masonry or other corrosive non-metallic materials that might be wet continually. To prevent problems with wood, use DD grade structural plywood.

6 Environment

6.1 Recycling

- Aluminium: Falzonal prepainted aluminium can be recycled without problem and without any loss of quality
- Copper: The recycling of copper is as old as the use of copper itself. Recovery rates of nearly 100% are achieved. Copper scrap is recycled in the production process and accounts for more than 40% of copper used today. Energy savings from the use of recycled material total 80-92% compared with the energy required to produce from primary metal.
- Stainless Steel: Steel is one of the world's most recycled products. Currently in Australia about 70 percent of available steel scrap is recycled.

6.2 Ecology

- Aluminium: All the results from tests of Falzonal under various weather conditions have confirmed that it poses no risk to the environment. Aluminium is not known to cause any harm to plants or animals, or to affect ground water or surface water. According to the German food laws, the use of aluminium is not subject to any restrictions
- Copper: Copper can be used without polluting the environment. The amount of copper washed off from copper roofing, cladding and guttering systems during rainfall is low because of copper's high corrosion resistance.
- Stainless Steel: There are no proven health risks from the normal use of stainless steels. The possible risks from alloying elements such as nickel and chromium are under constant review by experts.

Subject to change without notice