

1 General

This specification document describes supply and fixing Aluminium Composite Copper Panel System

1.1 CROSS REFERENCES

General

Refer to the General requirements work section.

Related work sections

Refer to the following work sections:

Light Timber Framing

Light Steel Framing

2 Warranty

2.1 WARRANTY

Warrant work under normal environmental and use conditions against failure of workmanship, materials, fixing, waterproofing, weatherproofing and surface coatings.

INSTALLATION WARRANTY

Period: 5 years against workmanship

From: Date of completion.

MANUFACTURERS/INSTALLERS WARRANTY

Period: 15 years against Perforation

From: Date of completion.

Requirements

2.2 INSTALLATION OPERATIVES

All installation operatives must be approved TARC trained installers, who are specifically trained in the installation and handling of Aluminium Composite Copper Systems.

2.3 FIXINGS - WIND

Refer to Specific Design by Structural Engineer

2.4 PERFORMANCE

Accept responsibility for the performance of the panel system including penetrations and associated flashings

3 MATERIALS AND COMPONENTS

3.1 COPPER Mineral Filled (A2) COMPOSITE PANELS

Standard: To AS 2924.1, AS 1530.3, ISO 9705

Description

Prefabricated panels shall consist of:

☑ 3/4mm selected Mineral core

☑ Front surface layer copper, rear surface layer copper or aluminium.

Thickness

Total panel thickness: 4mm

Flashings/Capping

Standard: To AS/NZS 2904

Materials: Copper/Aluminium/zinc coated steel – colour matched to cladding.

4 EXECUTION

4.1 CONSTRUCTION GENERALLY

Substrates and framing

Before fixing cladding, check and, if necessary, adjust the alignment of substrates and framing.

Fixing

Method shall be prefabricated cassettes fastened with rivets, bolts, screws, double-sided tape.

4.2 Preparation (Cassette method)

- a) All cladding panels shall be factory fabricated and assembled to the highest standard of workmanship under experienced factory supervision and control.
- b) All panels shall be fabricated into cassettes complete with aluminium sub frame.
- c) All seams of mitred joints of the sub frame shall be sealed with an approved sealant.
- d) The finished cassette panels shall be delivered to site complete with component markings for easy identification and assembly.

4.3 Fixing (Cassette Method)

- a) Fastener clips and other items required for connection of aluminium components shall be of non-magnetic stainless steel.
- b) Adhesive double-sided tape used for fastening .5 Stainless Steel female clip to Composite Panels manufactured by Trespa Tapes.
- c) Male Stainless-Steel clip fixed to 4mm Aluminium or stainless steel top hat vertical rail system, fixed with suitable Stainless Steel self-taping screws
- d) 4mm Aluminium or stainless steel top hat vertical rail system fixed to sub-frame with 25mm*3mm*10mm flat stainless screws.

4.4 Cavity depth and ventilation

For a continuous ventilation behind the panel, TARC recommends the free air cavity depth between the rain screen cladding and the insulation or wall construction to be between 20 and 40 mm, in order to allow for ambient air to flow through from the ventilation inlets and outlets. Ventilation inlets and outlets must be the equivalent of minimum 50 square cm per linear meter over the whole façade. Cavity depth as well as ventilation inlets and outlets must be in accordance with applicable building standards, regulations and certificates.

4.5 Sub-frame

Aluminium Composite Copper panels must be installed on a sub-frame of sufficient strength and permanent durability. Quality

and/or treatment of the sub-frame must be in accordance with applicable building standards and regulations.

4.6 Expansion and contraction

The cladding shall be fabricated and erected so as to provide for all expansion and contraction of the components. Any temperature change due to climatic conditions shall not cause harmful buckling, opening of joints, undue stress on fastenings and anchors, noise of any kind or other defects.

4.6 Installation

- a) No cutting, trimming, welding or brazing of components which could in any manner damage the finish, decrease the strength or result in visual imperfections or failure in performance shall be executed during installation. Components which require alteration shall be returned to the factory. If necessary, replace with new components.
- b) All components shall be installed level, true to line with uniform joints and reveals.
- c) Anchorage of the cladding substructure to the building structure shall be by approved methods in strict accordance with the specification and approved shop and/or installation drawings. Supporting brackets shall be so designed as to provide three-dimensional adjustments and accurate location of wall components.
- d) All joints between panels shall be set at widths as shown on the drawings with a tolerance of $\pm 2.0\text{mm}$. No two adjacent or perpendicular joints shall have a difference in width of more than 2.5mm. In addition, the tolerance between adjacent panels across any joint shall not exceed 1.5mm locally.
- e) The whole of the installation shall be in strict accordance with the manufacturer's instructions.

5 COMPLETION

5.2 Maintenance manual

Contents: Submit a maintenance manual containing technical specification of the cladding system setting out the manufacturer's recommendations on maintenance, to the Principal at Practical Completion. Include the names and addresses of the suppliers, manufacturers and installers of each component

5.3 Cleaning

Final Cleaning: When installation is complete, remove extraneous matter and marks off the facade components in a manner which leaves the completed installation free of any streaking, spotting or non-uniform appearance. Protection: Protect as necessary and leave the finished work undamaged on completion.