

METALCRAFT INSULATED PANEL SYSTEMS SUPIRPANEL

PURPOSE

Metalcraft Insulated Panel Systems supply suPIRpanel for use as insulated, fire-resistant, fully finished wall and roof panel.

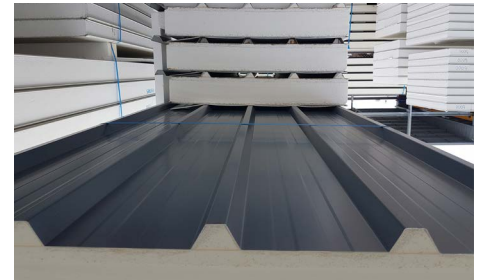
EXPLANATION

suPIRpanels are lightweight, thermally efficient wall and roof panels manufactured in New Zealand. The panels have a polyisocyanurate (PIR) core sandwiched between 0.59 mm layers of galvanised steel and with a factory applied Colorsteel® finish. The Colorsteel® finish will depend on the specific exposure zone and use.

The panels are 1000 m in width, custom lengths and in the following thicknesses (mm): 50, 75, 100, 125, 150, 200, 250, 300. The thickness depends on the thickness of PIR core. The thickness determines thermal performance and span capability.

The panels are supplied with a tongue and groove joint and a lapped corrugation on both edges. The facings are available in the following profiles:

- Flat smooth profile
- Silklime
- Mesa
- Ribbed indented.



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SCOPE AND LIMITATIONS OF USE

| Scope | Limitations |
|--|--|
| Location In all wind zones up to and including extra high wind zone as defined in NZS 3604:2011 or a calculated wind design pressure (ULS) of 2.5 kPa. With a snow loading of up to 1 kPa. In all exposure zones as defined in NZS 3604:2011. | <ul style="list-style-type: none"> ➤ In accordance with Metalcraft suPIRspan Load-span tables for roofs and walls. ➤ Where the system is to be used in a microclimate (as defined in clause 4.2.2, NZS 3604:2011), Metalcraft Insulated Panel Systems is to be consulted. ➤ In exposure zone D, Colorsteel® Maxx® must be specified. ➤ In exposure zone C, Colorsteel® Maxx® or Endura® may be specified. ➤ In exposure zone B, any Colorsteel® product may be specified. |
| Any proximity to a relevant boundary. | |
| Building In new buildings where the relevant part of the building complies with the NZ Building Code or in existing buildings where the designer and installer have assured themselves that the relevant part of the building is adequate for the intended building work. In all building uses. | <ul style="list-style-type: none"> ➤ In accordance with Metalcraft suPIRspan Load-span tables for roofs and walls. ➤ Fixings must be appropriate for loads as given by AS/NZS 1170 Set. ➤ Where compliance with G3.3.2 (a, b) is required, Colorsteel® CP-Antibacterial must be specified for the internal facing of the panel. |
| As a wall panel. | <ul style="list-style-type: none"> ➤ Where the panels are to be load-bearing, they must be installed in conjunction with steel or timber structural framing and on a concrete slab or subfloor structure. ➤ With joinery that complies with NZS 4211:2008. ➤ Where fire-resistance rating (FRR) for passive fire protection is required, the passive fire protection systems must be specifically designed. ➤ For buildings less than 10 m in building height. |
| As a roof panel. | <ul style="list-style-type: none"> ➤ With a minimum roof pitch of 3°. |

CONDITIONS

The specification and installation of suPIRpanels are to be in accordance with the ThermoPanel EPS specification and installation.

OTHER CERTIFICATIONS AND APPROVALS HELD BY NZ STEEL ASSURANCE:

As the manufacturer of the steel that is used in the manufacture of suPIRpanel, New Zealand Steel Ltd. provides assurance that the steel:

- has been manufactured in accordance with AS 1397-2001
- is coated in accordance with AS/NZS 2728:2013 or galvanized in accordance with AS/NZS 2312.2:2014.

New Zealand Steel Ltd. has established an Environmental Management System certified to ISO 14001.

For more information on the specific exposure zones and environmental impacts of the product, refer to www.colorsteel.co.nz.

USEFUL INFORMATION

For information on the design, installation and maintenance of suPIRpanel, and for our warranty, refer to www.metalcraftgroup.co.nz.

VERSION:

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Metalcraft Insulation Panel Systems requirements, suPIRpanels will comply with or contribute to compliance with the following performance claims:

| NZ Building Code clauses | Compliance statement | BASIS OF COMPLIANCE Demonstrated by |
|--|--|---|
| B1 Structure B1.3.1, B1.3.2, B1.3.3 (a, b, e, f, h, j), B1.3.4 (b, c, d e) | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification [GlobalMark, 28/06/2017]. ➤ Span in accordance with suPIRspan tables, v1.0, dated November 2019. |
| B2 Durability B2.3.1(a) | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification evaluation [Global-Mark, 28/06/2017]. |
| C3 Fire affecting areas beyond the fire source C3.4 (a) C3.5 C3.7 (b, c) | ACCEPTABLE SOLUTION C/AS2 1st Edition June 2019 | <ul style="list-style-type: none"> – Steel melts at temperatures >750 °C (refer to para. C7.1.5, C/AS2). – Material group 1S when tested to ISO 9705:1993 [BRANZ FI11055-001, 17/04/2019]. ➤ Metalcraft Insulated Panel Systems confirmed the PIR core in suPIRpanel is the same as that tested in BRANZ Type Test FI11055-001. |
| E2 External moisture E2.3.1, E2.3.2, E2.3.3, E2.3.7 (b, c) | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification evaluation [Global-Mark, 28/06/2017]. |
| E3 Internal moisture E3.3.1, E3.3.4, E3.3.5, E3.3.6 | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification evaluation [Global-Mark, 28/06/2017]. |
| F2 Hazardous building materials F2.3.1 | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification evaluation [Global-Mark, 28/06/2017]. |
| G3 Food preparation and prevention of contamination G3.3.2 (a, b) | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Global-Mark CodeMark certification evaluation [Global-Mark, 28/06/2017]. |
| H1 Energy Efficiency H1.3.1 (a, b), H1.3.2E | ALTERNATIVE SOLUTION | <ul style="list-style-type: none"> ➤ Determination of R-values and energy performance of PIR [DASCO, 30/08/2019]. |

| Other performance statement | Performance statement | BASIS OF STATEMENT Demonstrated by |
|--|-----------------------|--|
| suPIRpanel will not contaminate potable water. | AS/NZS 4020:2005. | <ul style="list-style-type: none"> ➤ Claimed by New Zealand Steel Ltd. [New Zealand Steel Ltd. 2018]. ➤ BRANZ statement that metal roof is suitable [BRANZ, 2018]. |

SOURCES OF INFORMATION

- BRANZ. [17 April 2019] *BRANZ TYPE TEST AS ISO 9705 & ISO 9705 FIRE TEST OF THERMOPANEL PIR*. Report No. FI11055-001.
- BRANZ. *Water. Harvesting rainwater*. Retrieved from <http://www.level.org.nz/water/water-supply/mains-or-rainwater/harvesting-rainwater/>. [Accessed on 25/06/2020].
- DASCO. [30/08/2019] *Product Test Report. R-Value (m2.K/W). Test method: KS M 3809*. Report No. DA-190830-22-01.
- Global-Mark. [28 June 2017] *Metalcraft Insulated Panel System CodeMark Certificate of Conformity*. Certificate No. GM-CM30078-RevC. Retrieved from <https://www.building.govt.nz/assets/Uploads/building-code-compliance/certifications-programmes/product-certification-scheme/product-certificate-register/metalcraft-insulated-panel-system.pdf>. [Accessed on 18/06/2020].
- red co Consulting Professional Engineers. [n.d.] *Metalcraft suPIRspan – Load-span Curves*.
- New Zealand Steel Ltd. [October 2018] *Product technical statement v2018.1*. Retrieved from <https://tinyurl.com/y9paxqag>. [Accessed on 18/06/2020].
- New Zealand Steel Ltd. [October 2018] *Environmental Categories, Warranty & Product Maintenance Recommendations*. Retrieved from <https://tinyurl.com/y9paxqag>.

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- New Zealand Steel Ltd. [October 2018] *Incompatible Materials*. Retrieved from <https://tinyurl.com/y9paxqag>. [Accessed on 18/06/2020].

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www.metalcraftgroup.co.nz



1. Where a standard is referenced it is to be read as amended by the acceptable solution or verification method as applicable.
2. Sources of information also include the Building Act 2004 and its regulations, including the Building Code (Schedule 1 of the Building Regulations 1992), Acceptable Solutions and Verification Methods, and relevant cited standards.

Metalcraft Insulated Panels confirms that if suPIRpanel is used in accordance with the requirements of this pass™ the product will comply with the Building Code and other performance claims set out in this pass™ and the company has met all of its obligations under s14 G of the Building Act.

Date of first issue:

Date of current issue:

NZBN: 9429036310852

Kevin Brunton

Kevin Brunton, Technical Director, TBB confirms that this pass has been prepared on behalf of the Metalcraft Insulated Panels and in accordance with MBIE PTS guidelines and in accordance with the TBB pass™ process which is within the scope of TBB's ISO 9001 certification.

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