

smartfix[®] SymFix[®] - Aluminium Composite Panel

SymFix[®] is an Australian manufactured composite panel, produced exclusively by Symonite Australia Pty Ltd.

With the combination of the smartfix[®] Fixing system and Symonite panel SymFix[®] is suitable for curtain walling and cladding, fascias, columns, furniture, signage, soffits, spandrels, balustrades etc or wherever a non-flammable, strong, lightweight panel is required.

Standard Panels

Thickness: 5mm or 6mm

Width: 1220mm

Lengths: 1850mm, 2150mm, 2500mm & 2850mm

Standard SymFix[®] is manufactured with 0.5mm aluminium faces; the exterior face is coil coated with PVF2 (PVFD), the interior face is normally mill finish. Other sizes, thickness and finishes may be available on request.

Core -

Data

The core is a fully cured fibre reinforced Phenolic Resin bonded under heat and pressure to the outside metal faces.

| | 5mm | 6mm |
|--|-------------|-------------|
| Minimum Radius | 450mm | 600mm |
| Modulus of Rapture (Bending) | 190 MPa | 190 MPa |
| Bending Stiffness (EI x 1000) | 245 Nmm_/mm | 615 Nmm_/mm |
| Ultimate Sheer Resistance (in plane of core) | 11.5 MPa | 11.5 MPa |

Curved Shapes -

Physical and Mechanical Properties

It is recommended that the tensile stress in a panel under maximum wind load should not exceed 71 MPa.

Thermal Expansion

Coefficient of thermal expansion: 22×10^{-6} mm/mm/°C

Thermal Resistance

SymFix[®] is stable up to a temperature of 150_C. 4mm - 0.018m_K/W

Acoustic Properties

4mm - 29dB; 6mm - 30dB

Fire Performance -

SymFix[®] PVF2 COATING

A. AS1530.3 - 1989

Tests for Early Fire Hazard Properties of materials:
 Ignability Index (Range 0 - 20) - Rating 0
 Spread of Flame Index (Range 0 - 10) - Rating 0



John Curtin Medical School - Canberra ACT
 Architects: Lyons Architects

Heat Evolved Index (Range 0 - 10) - Rating 0

Smoke Developed with Index (Range 0 - 10) - Rating 0 - 1

B. BS476 Part 6

Method of test for fire propagation of materials.

Result : Index i1 - 0.0, Index i2 - 0.5, Index i3 - 0.2

Fire propagation Index - 0.7

C. BS476 Part 7 1987

Method for classification of the surface spread of flame of products.

Classification - Class 1

D. Building Code of Australia : SymFix[®] complies with the BCA requirements regarding materials suitable for the exterior cladding of a building facade on a multi storey building. See CSIRO Opinion Number FCO-1024 for full details.

Durability

No change in bond strength after 1000 hours of acid salt spray exposure in accordance with ASTM B287-74.

The advantages of SymFix's core

The advantages of SymFix[®] over other composite panels available to building professionals stem from its unique thermosetting core construction.

Extreme Impact Resistance makes SymFix[®] a suitable building element where compartmentalisation of fire is an important aspect in fire safety engineering and design.

High Degrees of Stiffness and Rigidity reduces facade engineering and construction costs through superior wind loading characteristics.

High Temperature Stability prevents creep and telegraphic deformation of the external face of the panel on high ambient or high surface temperature conditions because the core does not soften.

UV Stability means that the panel edges can be fully exposed to the elements thus introducing design and fabrication options and also reducing fabrication and installation costs.

Homogenous Thermal Expansion means no differential thermal expansion between the panel's aluminium skin and its core, thus ensuring panel flatness over a wide temperature range.