

Aluminium composite panels (ACP)

Key facts

- ACP contains a core material between two skins of aluminium.
- The core material can have varying polymer (plastics) composition; polymers are combustible.
- The higher the core's polymer content, the greater potential for fire spread.
- Higher polymer content cores are often black or dark grey.

Aluminium composite panels with a polymer core are combustible, with higher polymer content being linked to a greater potential to propagate and spread fire up the building façade.

Aluminium has a low melting point of around 660°C. Temperatures may be around 800°C to 1200°C in a fire, which may melt the aluminium skin of the panels and ignite the core.

The Insurance Council of Australia (ICA) classifies ACP into categories (Categories A-D) according to the core composition, based on polymer content. The risk of fire spread associated with ACP is generally commensurate to the polymer content of the core, with Category A being the highest risk and D being the lowest. Caution should be taken to understand what other combustible elements were installed with the ACP, such as insulation, which may worsen performance. The ICA Categories are described below:

ICA category A, also known as PE type

Polymer content of 30-100%.
Core is often black. This type constitutes the highest potential for fire spread.

ICA category B, also known as FR type

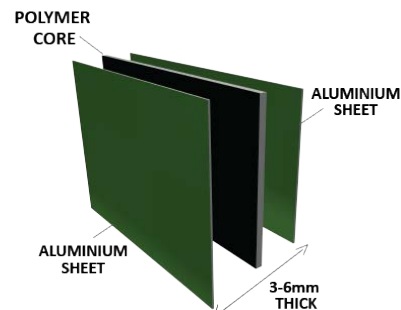
Polymer content of 7-30%.
Core is often grey.

ICA category C, also known as A2 type

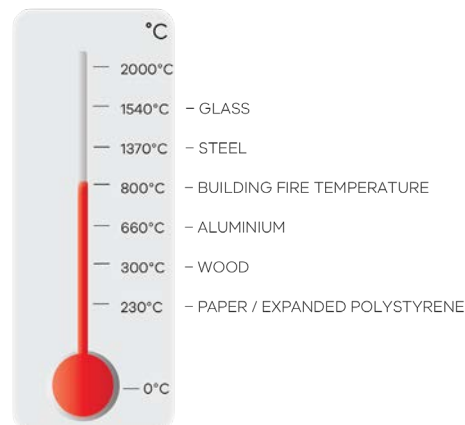
Polymer content of less than 1-7%.
Core is often light grey.

ICA category D, also known as A1/NC or aluminium honeycomb products

Trace or no polymer content.
Core can be aluminium or a mineral product



A diagram of aluminium composite panels, showing the layers of aluminium with a polymer core.



Thermometer showing aluminium melting and ignition points



Example of ignited combustible cladding on apartment building

Want to know more?

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