

# FR-A Non-Combustible Architectural Panels

Achieves A2 classification to EN13501-1:2018

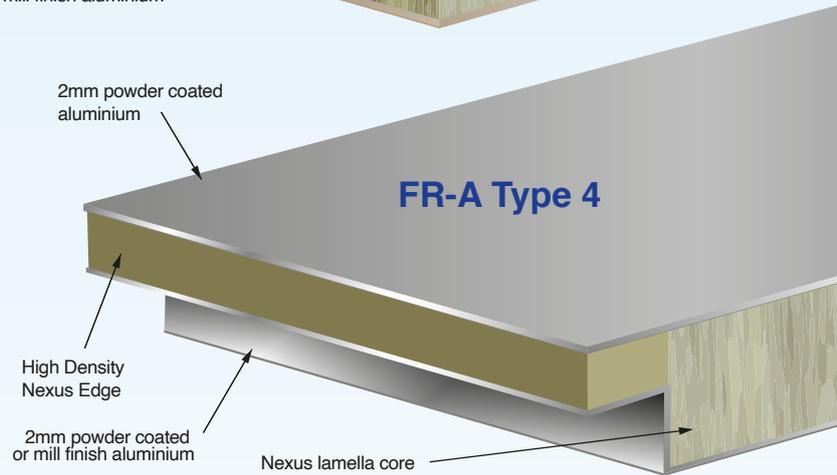
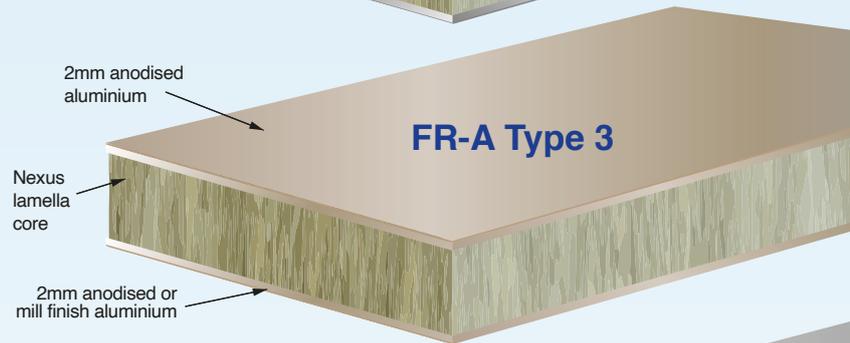
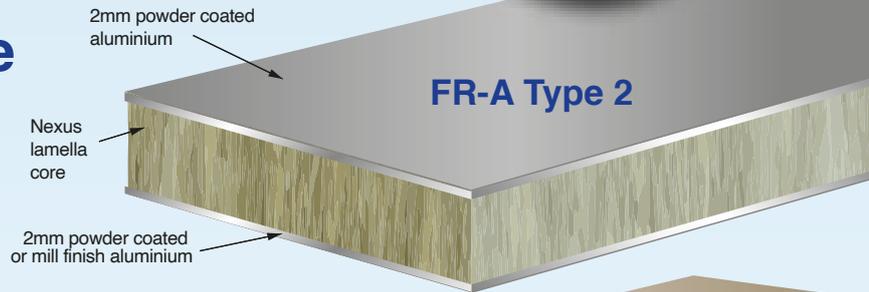
In 2018, changes were made to Approved Document B of the building regulations to improve the fire safety of properties. One of the changes imposed is to ensure the use of non-combustible materials in the walls of relevant buildings, which must now be Euroclass A1 or A2-s1,d0.

Panel Systems' range of non-combustible architectural panels includes three types of A2 rated insulated panels for glazing and curtain walling applications.

Manufactured at the company's Sheffield based facility to approved ISO 9001:2015 management standards, the range (FR-A Types 2, 3 & 4) achieve A2-s1,d0 classification when tested against the procedures detailed in EN 13501-1:2018.

Each panel has been specifically designed with a fire resisting, non-combustible core of Nexus Lamella, the fire safe material for composite structures.

FR-A panels are available in both Anodised and Powder Coated finishes. The panels go through a bespoke, controlled manufacturing process, which includes stringent quality checks on each component to ensure they meet the required standard of the tested specifications.



FR-A non-combustible panels offer Architects, Specifiers & Developers an ideal glazing panel that is compliant with UK Building Regulations. Due to the large range of finishes and thicknesses available, FR-A panels are ideal for use in both new construction projects and for the replacement of existing non-compliant spandrel panels.

The panels also have excellent acoustic properties (calculations of which are available upon request from Panel Systems' experienced technical team) and can be manufactured to meet specific U-value and wind loading requirements. In addition, the technical team can offer a full support service to meet the performance criteria for your specific application.

## Testing process

To receive a classification against EN 13501-1: 2018, Panel Systems' range of FR-A Non-Combustible Architectural Panels required testing against two standards:

1. **EN ISO 1716:2018** - Determination of the gross heat of combustion.

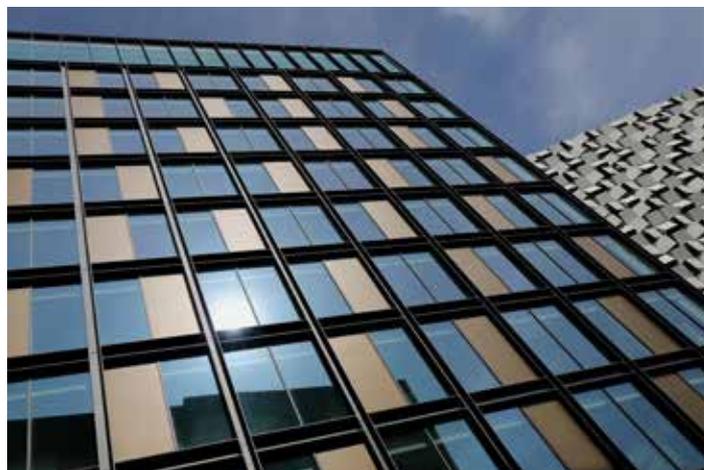
A sample of each material used in the panel was tested to determine the gross heat of combustion, also known as the calorific value. This value represents the maximum amount of thermal energy the material could contribute to a fire.

The EN 13501-1 classification imposes strict limits on both the overall calorific value of the assembled panel, as well as limits on each component of the panel.

2. **EN 13823:2020** - Single Burning Item test.

Pairs of panels were assembled into an internal corner configuration; a gas burner was then used to apply a heat flux to the panels. Various measurements were taken including the total quantity of smoke produced (TSP), the smoke growth rate (SMOGRA), and the rate of heat release from the panel (FIGRA).

Testing and classification was completed by the independent test house, Efectis France.

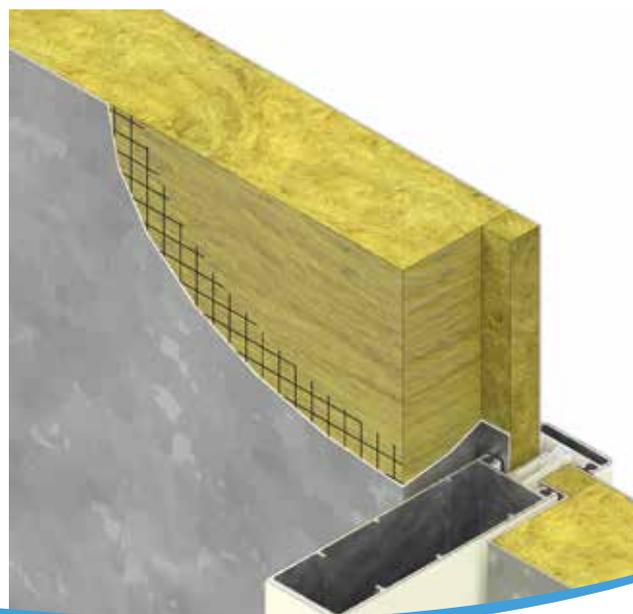


- ✓ Achieves A2-s1,d0 classification
- ✓ Available in powder coated and anodised finishes
- ✓ Excellent thermal properties
- ✓ Good compressive strength
- ✓ Over 45 years experience in the industry
- ✓ Manufactured to quality standard ISO 9001:2015

## About Panel Systems

Since 1974 Panel Systems has built a reputation as an expert in the manufacture of innovative, bespoke panels for a diverse range of markets; from leisure and playground equipment to caravans, truck bodies, the window industry and construction.

We pride ourselves on our highly experienced team of customer service staff, CAD designers, production operatives and logistics specialists. We have the capabilities to manufacture high quality, architectural panels in both small and large quantities. Located in Sheffield close to the M1, we are ideally situated for delivery of product direct to sites throughout the UK and beyond.



For pricing, or to discuss your requirements in more detail, please contact on 0114 249 5635 or email: [acp@panelsystems.co.uk](mailto:acp@panelsystems.co.uk)  
[www.panelsystems.co.uk](http://www.panelsystems.co.uk)