

# Polyisocyanurate (PIR) panels

When it comes to all round panel performance, PIR is tough to match. Panels deliver insurer approved levels of fire resistance, an impressive strength to weight ratio, hygiene and temperature control, plus fast build times.

## Applications

For over 20 years PIR panels have been used as internal walls, ceilings and linings, as well as for external envelopes. PIR is one of the most efficient insulating materials around. Its low-density rigid foam gives it increased fire performance, lower combustibility and high insulation levels. In fact, temperatures as low as -40° can be maintained.

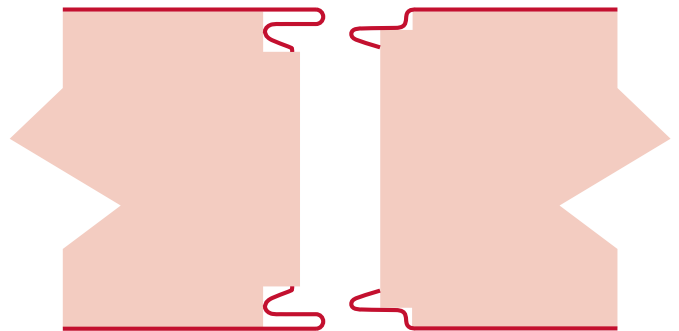
- Loss Prevention Certification Board (LPCB) approved
- Fire Performance Characteristics: LPS 1181 Part 2 and LPS 1208 Issue 2 FR30 - FR60
- BS476 Part 22E 30/60 Minutes

## Core

Specify this system and it will virtually eliminate the risk of mould and bacterial growth thanks to its ability to repel water and vapour. PIR panels are also fibre free, so there's no risk from airborne contamination. Engineered joints give excellent air tightness for further protection. Lengths of up to 18m give you more flexibility in design and can speed up construction. You can also specify stainless steel and aluminium facings.

## Jointing

The panels have high performance, interlocking metal facings, to provide a secure and consistent joint. These are sealed with silicone for a continuous anti-bacterial barrier.



## Facing

Panels are finished with stainless steel or aluminium facings. A choice of coatings include: Foodsafe laminate/polyester, PVF2 and HPS200.

## Fire protection

Cores provide fire resistance of up to 1 hour. When exposed to flame, PIR forms a strong, carbonaceous char that protects the core foam from ignition. PIR is recognised by the industry as the fire safe alternative to other foam cores, including polyurethane.

### Technical specifications

Panel thickness	40mm – 200mm
Max panel length	18m
Max wall height (unsupported)	14m
Max ceiling span (unsupported)	11m
Panel weight	10.3 – 17kg/m <sup>2</sup>
Fire Rating	LPS1208 30 - 60 minutes
U Value	(W/m <sup>2</sup> K) 0.40 – 0.10

# Mineral Fibre panels

For leading fire resistance and hygiene, Mineral Fibre panels are the ideal choice for wall applications including hygienic environments, firewalls and partitions.

## Applications

Used regularly for wall and ceiling installations for temperatures above 0°C, they offer the optimum balance between performance, cost and weight. They also offer excellent acoustic and sound proofing qualities.

## Core

Mineral Fibre is a high performance, non-combustible bonded Rockwool. With fibres running vertically it provides high shear, compression and tensile strengths. Panels give impressive levels of insulation, excellent fire resistance and soundproofing properties.

The Rockwool core is water repellent, free of (H) CFC's and fully recyclable. Completely vermin and rot proof and virtually eliminates the growth of fungi, mould or bacteria.

## Facing

Panels are finished with steel facings. A choice of coatings include: Foodsafe laminate/polyester, PVF2 and HPS200. Alternatively, you can specify stainless steel or aluminium facings.

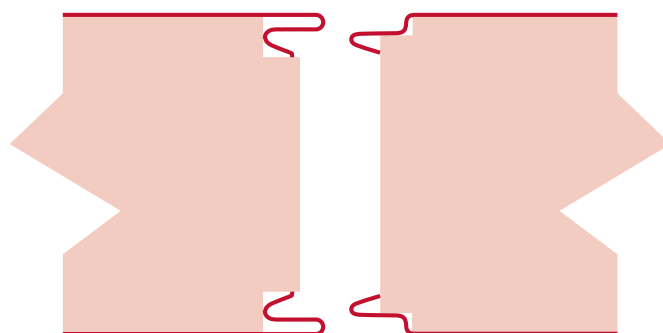
## Fire protection

Mineral Fibre is a non-combustible core providing fire resistance of up to 4 hours.

- Loss Prevention Certification Board (LPCB) approved
- Fire Performance Characteristics: LPS 1181 Part 2 and LPS 1208 Issue 2 FR30 - FR240
- BS476 Part 22E 30/60/120/240 Minutes

## Jointing

The panels have high performance, interlocking metal facings, to provide a secure and consistent joint. These can be sealed with silicone for a continuous anti-bacterial barrier.



### Technical specifications

Panel thickness	60mm – 200mm
Max panel length	14m
Max wall height (single span)	11.5m
Max ceiling span (unsupported)	8.2m
Panel weight	15.5 – 38kg/m <sup>2</sup>
Fire Rating	LPS 1208/1181 Part 2, BS476 30 Part 22E, EN 1364 Part 1, EN 13501-2. 30 - 240 minutes
U Value	(W/m <sup>2</sup> K) 0.72 – 0.21
Max acoustic property	30 SR I (dB)

# Aluminium Honeycomb

Honeycomb is a lightweight core material offering excellent strength and corrosion resistance for industrial applications at low cost. The core is made from 3003 aluminium alloy foil.



## Applications

Aluminium Honeycomb panels can be used for many applications including walls, ceilings, floors, shelving, counter tops, platforms and many other uses.

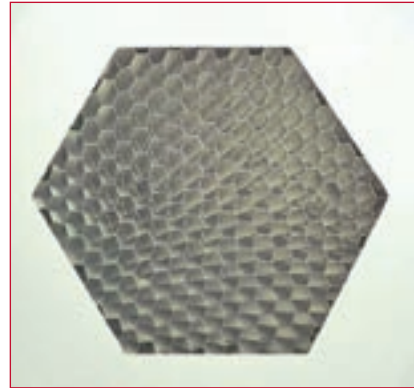
## Features

- Use Temperatures up to 177°C/350°F
- High Thermal Conductivity
- Flame Resistant
- Excellent Moisture and Corrosion Resistance
- Fungi Resistant
- Low Weight / High Strength

Honeycomb is available with or without cell perforations to enable cell venting for certain applications.

Special dimensions, cell sizes, tolerances and mechanical properties can be provided.

\*Varies with cell size



### Availability

Cell Sizes (mm)	6.4, 9.5, 12.7, 19.1, 25.4
Cell Sizes (inches)	1/4", 3/8", 1/2", 3/4", 1.0"
Densities (Kg/m <sup>3</sup> )	83.3, 57.7, 54.5, 40, 36.8, 28.8, 22.4
Densities (lbs/ft <sup>3</sup> )	5.2, 3.6, 3.4, 2.5, 2.3, 1.8, 1.4
Sheet Length (W)	6000mm max
Sheet Width (L)	1500mm max
Tolerances	Length: ± 2mm, Width: ± 1mm, Thickness: ± 0.5mm, Density: ± 15%, Cell Size: ± 15%

Honeycomb designation				Bare compressive				Plate shear				Plate shear			
Cell size		Nom/density		Strength		Modulus		Strength				Modulus			
								L		W		L		W	
inches	mm	lbs/ft	kg/m <sup>3</sup>	psi	mpa	ksi	gpa	psi	mpa	psi	mpa	ksi	gpa	ksi	gpa
1/4	6.4	3.40	54.5	290	2.00	80	0.55	175	1.21	105	0.72	36	0.25	18	0.12
1/4	6.4	5.20	83.3	620	4.27	148	1.02	345	2.38	215	1.48	63	0.43	31	0.21
3/8	9.5	2.30	36.8	140	0.97	35	0.24	105	0.72	65	0.45	22	0.15	11	0.08
3/8	9.5	3.60	57.7	325	2.24	92	0.63	210	1.45	130	0.9	40	0.28	20	0.14
1/2	12.7	2.50	40	165	1.14	40	0.28	130	0.9	70	0.48	24	0.17	15	0.1
3/4	19.1	1.80	28.8	110	0.76	24	0.17	95	0.66	55	0.38	16	0.11	8	0.06
1	25.4	1.40	22.4	75	0.52	16	0.11	55	0.38	40	0.28	14	0.10	7	0.05

## Framed panel system

Off the shelf or made to order systems have many benefits. Tongue and groove jointing guarantees very precise panel joins and simplifies panel installation. Panels can be framed on two or four sides to ensure a very flat, stable panel and provide maximum strength and rigidity. It's also very flexible. A wide range of cores can be used depending on your needs: aluminium or plastic honeycomb, PIR, extruded polystyrene, polystyrene or polyurethane. (Detailed data sheets are available on request).

## Skin materials

Panels are produced using a large array of skin materials ranging from aluminium through to galvanised steels, stainless steels and laminate products (see separate data sheets). Quotations for other faces are available on request.

## Adhesive

All panels are produced using a 2-pack PU solvent free adhesive, specially formulated for the bonding of honeycomb products. Adhesive is applied using the latest spray booth technology incorporating PLC and servo control to give very precise coat levels.

## Panel build

Panels are produced to a customer's individual requirements and can be produced with open sides or in board framing, using a large range of custom made or stock extrusions. Panels can be supplied with hidden or surface suspension systems for ceiling applications.

## Panel testing

Panel Projects honeycomb panels are manufactured and tested to BS6399 and produced in accordance with our ISO certification.

# Framed Panel System

Off the shelf or made to order systems have many benefits. Panels can be framed on two, three or four sides to ensure a very flat, stable panel and provide maximum strength and rigidity. A wide range of cores can be used depending on your needs. Plus, frame sections can be used to channel electrical, voice and data cables.

## Applications

Framed panels are used for applications such as clean rooms, wind tunnels, data suites, signage, spray booths, partition systems and ships. Panels can also incorporate our dedicated flush window system.

With a very tight joint detail, framed panels are ideal for pharmaceutical and microelectronics applications when you need a flat finish with smooth joints. They also work well in walk on ceiling applications where constant maintenance access is required.

Panels are tested for deflection to BS6399 specification or better when used with aluminium honeycomb. Panel systems are classed as non-combustible with '0' ratings.

## Core

The honeycomb core material is pre-vented for pressure equalisation within the panel and is available with many different skin combinations.

A wide range of cores can be specified, including: aluminium or plastic honeycomb, PIR, mineral fibre, extruded polystyrene, polystyrene or polyurethane.

*Separate data sheets for core materials are available on request.*

## Facing

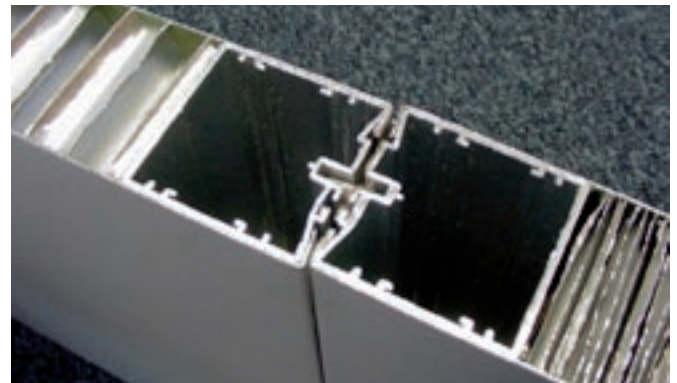
**Interior use finishes:** White PVC laminate (foodsafte), aluminium, GRP, polyester, grey primer and stainless steel.

**Exterior use finishes:** HP200 plastisol and PVF2. The thickness of the coloured facings are generally 0.55mm with the grey primer being 0.50mm.

*Separate data sheets for facing materials are available on request.*

## Jointing

Aluminium framed jointing guarantees very precise panel joins and simplifies panel installation.



### Technical specifications

Panel thickness	50mm
Max panel length	6m
Max wall height (single span)	6m
Max ceiling span (unsupported)	6m (3m walk-on)
Panel weight	11.8 – 15kg/m <sup>2</sup>
Fire Rating	panel classed as non-combustible – class 0
Acoustics	25 dB