



THE PANEL YOU NEED,
WITH THE CORE YOU WANT,
ON THE DATE YOU NEED IT.

ISOCLAD



INTRODUCTION



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WHO ARE WE?

Established in 1978, Isoclad are the UK's largest independent manufacturer of insulated composite panels and offer a complete range of cores manufactured to LPCB Test Standards, including Rockwool and Thermocore.



Along with our range of panels and cores, Isoclad are able to work towards any design requirement and are able to provide you with a full panelling system including any fixings, flashings and ceiling suspensions where required. This ensures that your build not only has structural strength and superior insulation, but also a visually pleasant and consistent finish.



OUR ETHOS

We pride ourselves on our one order, one delivery, and one invoice ethos.

Our flexible culture allows us to organise and respond to your project needs in a timescale that suits you together with offering complete technical and site back-up service.

We are able to offer a next-day delivery for ancillaries and 3 to 5 days for panels. Next day panel delivery is available upon request.



CERTIFICATION

Isoclad hold a comprehensive portfolio of fire testing accreditations and assessments, including approvals from the Loss Prevention Certification Board (LPCB) and Warrington Fire. All of Isoclad's products are manufactured to comply with the requirements of ISO 9001 standards.

Isoclad play an active role in the development of construction industry standards and continually seek to advance our product range through researching environmentally friendly production methods.

In January 2010, we combined our laminating capacity and engineering expertise to become the first large-scale panel manufacturer to offer built in enhanced security features within insulated panels – here, our sister company, Securiclad, was born.

The upgraded Securiclad core includes multiple layers and is certificated by the Loss Prevention Board to LPS 1175 SR5 and is ideal for environments where security is paramount.



THE INSULATED FIRE RATED PANEL SYSTEM

Non-combustible wall panels designed for internal linings, partitions for general industrial applications, high-risk environments as well as external applications.

The Firestop panel houses a Rockwool* (European fire classification Class A1 rated) core and due to its superior fire ratings and non-combustibility, these panels are especially suitable for high fire risk locations where cooking is prevalent or where there is a requirement for fire resisting walls to comply with building regulations.

The non combustibility of Rockwool, combined with the steel facings, gives Firestop panels a Class '0' rating and in-line with recent European classifications for reaction to fire, a Class A2.

Additional classification in relation to smoke production is s1 and flaming droplets/particles is d0.



Firestop 10 (Fstop10)

Lightweight fire rated non-combustible wall panels designed for internal linings and partitions for general industrial applications and high-risk environments.

Fstop10 has a density of 100kg and is suitable for low to medium height walls.

Firestop 12 (Fstop12)

This stronger, more durable fire rated non-combustible panel is primarily for use in internal and external applications where longer spans, greater loads, and improved fire performance ratings are required.

Fstop12 has a density of 125kg and is suited to longer wall spans and ceiling panels.

* Rockwool insulant comprises of mineral rock fibres bonded together with thermo setting resins to form the insulant materials.



PANEL JOINTS



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TWO TYPES OF JOINTS

Isoclad manufacture panels with two types of joints: Standard Intaloc and Secret Fix.

The steel edge itself is roll formed to create the male/female inter-locking joint which gives the assembled system its superb strength characteristics.

The joint allows application of site applied mastic or silicone to the female edge, creating an effective vapour or food safe hygienic seal which does not protrude beyond the face of the panel.

EXTERNAL / INTERNAL FACING FINISHES

We offer a complete range of facings available in 0.5mm and 0.7mm hot dipped galvanized substrate with the following pre-coated finishes:



External

Colorcoat® Leathergrain	Colorcoat® Prisma	HPS200 ULTRA
Colour coat leathergrain, A 200 micron PVC paint system with leathergrain emboss, available in various colours	Colour coat smooth 27 micron poly vinyl di fluoride stoved fluorocarbon, available in various colours	Colour coat Scintilla, organic coated 200 microns Scintilla, emboss of 40 microns. Available in various colours

Internal

White Food-safe Laminate	Polyester	Advantica® PR (Primer)
120 micron thick White Food-safe Laminate for internal hygienic areas.	Standard white 25 micron painting system consisting of primer and polyester finish. Various colours available on request.	A 7 micron epoxy paint primer that can be painted over as well as bonded adhesives.



The Bio-based Technology (BT) coating with optimised properties for tiles and profiles. GreenCoat Mica BT is a product with an exclusive, glittery textured surface.

PANEL DIMENSIONS

- Width:** Standard panel width 1190mm
Non standard panel width down to 900mm can be accommodated by arrangement
- Thickness:** Range from 40mm up to 200mm
- Length:** We can manufacture panels to any length; the only restrictions being the transport and handling constraints.



PANEL JOINTS

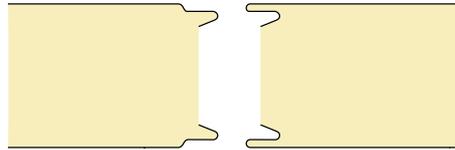


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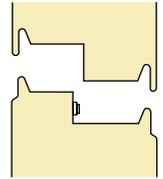
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Joint Detail

Roll formed to create the male/female inter-locking joint.



Secret Fix



Profiles (Not to Scale)

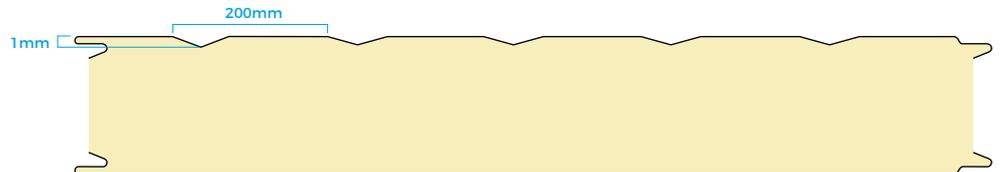
Flat

Laminated panel produces a much flatter surface than other manufacturing methods, but 'optical' flatness is not assured; some shadowing might be evident in certain lighting situations.



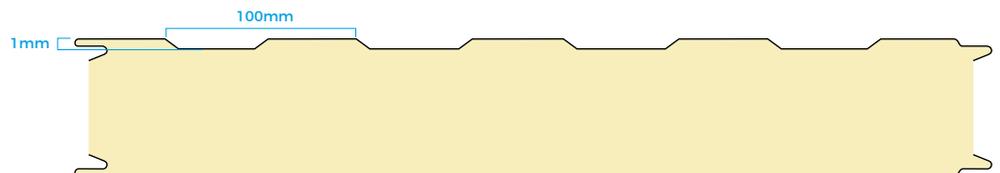
V-Rib

(Pitch 200mm - 5 per panel)



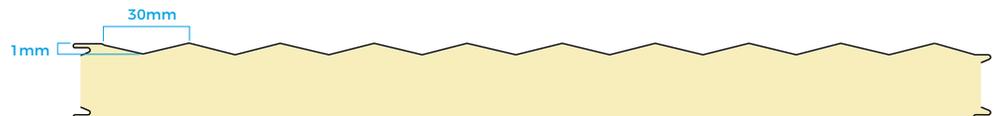
Castellation

(Pitch 100mm)



Micro Rib

(Pitch 30mm - 1 side only)



RESISTANCE



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MEETING REQUIREMENTS

To increase the performance of our panels, we continuously develop our products to ensure Isoclad permanently meet the latest legislative requirements, building control regulations and insurance company requirements.

Newly developed products undergo thorough in-house testing and we also carry out regular fire tests in established testing centres, such as BRE Global and Warrington Fire.

THERMAL RESISTANCE

Different cores give panels different thermal resistances which results in some panels being more suitable for fire applications, such as bakeries, and others more suitable for chill or freeze related applications, such as cold stores and indoor ski slopes.

We are the UK's largest independent LPCB approved manufacturer of the full range of panel cores (Rockwool and Thermocore) and therefore uniquely positioned to give totally unbiased advice on panel applications.

If in doubt, specifiers should refer to their insurance provider or the latest IACSC guide to ascertain the correct core material according to risk.

All Isoclad panels are produced in accordance with Building Regulation requirements and meet the highest thermal resistance standards. Different requirements can be met by the correct selection of core type and thicknesses.



FIRE RESISTANCE

Fire resistance is measured in terms of:

Integrity – the ability of a system to stop the penetration of hot gases and flames

Insulation – the ability of a system to reduce the temperature rise on the unexposed side of the fire and therefore prevent fire spread through radiated heat.

FIRE RATINGS & MAXIMUM UNSUPPORTED SPANS

Isoclad Firestop panels used in a wall application will provide equal fire performance from both sides i.e. symmetrical fire performance and require NO additional components in order to achieve the excellent ratings shown in the following tables opposite.

When considering the fire resistance of a panel system it is important to refer to both integrity and insulation.



Vertical

Fire Ratings & Maximum Recommended Span

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22*
Firestop 10 Walls (Stitched)	100 - 200	240	60	6.90	6.9 - 9.5
Firestop 10 Walls (Unstitched)	75	30	30	3.00	-
	100 - 200	30	30	5.50	6.9 - 9.5
	100	60	60	4.00	6.9
	125	60	60	4.65	7.9
	150 - 200	60	60	5.50	8.8 - 9.5
	150	90	90	4.00	8.8
	175	90	90	4.35	9.3
	200	90	90	5.00	9.5
Firestop 12 Walls (Stitched)	150	219	178	-	11.0
Firestop 12 Walls (Unstitched)	75	30	30	3.00	-
	75	60	60	3.00	-
	100 - 200	30	30	7.50	9.3 - 12.0
	100 - 200	60	60	6.00	9.3 - 12.0
	100	90	90	4.00	9.3
	125	90	90	5.00	10.2
	150 - 200	90	90	5.50	12.0
	150	120	120	4.50	11.0
	175	120	120	5.25	11.7
	200	120	120	5.50	12.0

Horizontal

Fire Ratings & Maximum Recommended Span

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22*
Firestop 10 Walls (Stitched)	100 - 200	240	60	6.90 - 7.50	-
Firestop 10 Walls (Unstitched)	100 - 200	30	30	6.00	6.9 - 8.0
	100 - 200	60	60	4.00	6.9 - 8.0

Ceilings

Fire Ratings & Maximum Recommended Span

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22*
Firestop 12 Ceilings (Un-stitched)	100 - 125	30	30	6.00	-
	150 - 200	30	30	7.50	-
	100 - 125	60	60	4.40	-
	150 - 200	60	60	6.00	-
	150 - 200	90	90	4.70	-
	150 - 200	120	120	4.10	-

*BS476 Part 22 standard requires panels to be stitched at 3m centres

TECHNICAL SPECIFICATION



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Notes

1. Tables are Derived from CERAM Laboratory Test Data Ref (QT18518/2/JB) Carried out in January 2012.
2. Load Tables show Unfactored Loads and are based on an elastic deformation limit of Span / 200
3. Span data based on 0.5kN/m² uniformly distributed load (NOTE other manufacturers may quote a lower figures of 0.25)
4. Reference should be made to BS EN 14509 2013 - Self Supporting Double Skin, Metal Faced Insulation Panels where appropriate.
5. Loads refer to lateral applied wind loads, where panels are quoted as ceiling panels, suitable allowance has been considered for self weight.

Structural Walls

Maximum Recommended Span (m)

Core Thickness	50	75	100	125	150	175	200
Firestop 10	5.1	6.0	6.9	7.9	8.8	9.3	9.5
Firestop 12	-	8.4	9.3	10.2	11.0	11.7	12.5

Structural Ceilings

Maximum Recommended Span (m)

Core Thickness	50	75	100	125	150	175	200
Firestop 12	-	5.4	6.0	7.0	7.5	7.9	8.2

Panel Weight Kg/m²

Panel Weights in kg/m² based on 0.5 thickness steel Add 1.1 kg/m² for ceiling or 0.7 panels

Core Thickness	40	50	75	100	125	150	175	200
Firestop 10	-	13.9	16.8	19.6	22.5	25.4	28.3	31.1
Firestop 12	-	14.9	18.3	21.6	25.0	28.4	31.8	-

Thermal Properties

Insulation Materials	Thermal Conductivity W/m ² °c	40	50	75	100	125	150	175	200
Firestop 10	0.040	-	0.80	0.53	0.40	0.32	0.27	0.23	0.20
Firestop 12	0.042	-	-	0.56	0.42	0.34	0.28	0.24	-

FIRESTOP CASE STUDY

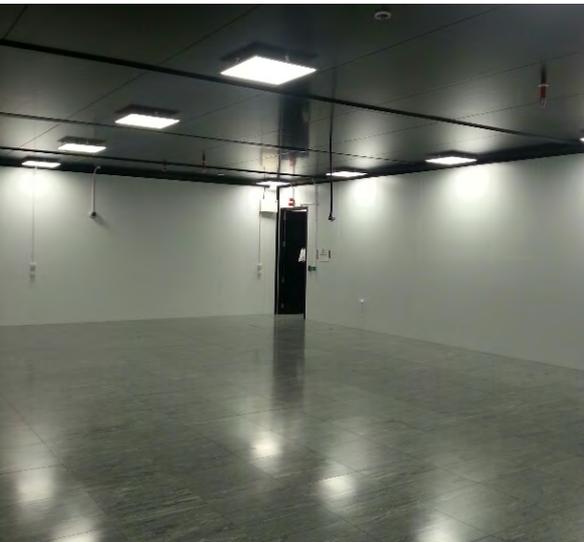
DATA CENTRE ENCLOSURE

Isoclad were approached by a prestigious technology company for assistance in building a data centre enclosure at their headquarters located on the South Coast of England.

It was identified that the existing portal frame design with external sheeting would benefit from an increase in both physical security barrier and fire ratings associated with composite panels, together with their desired U value.

For the external walls, Isoclad were able to retrofit their acclaimed FireStop 12 fire rated composite panels and system components onto the existing portal frame.

Internal walls and ceilings were constructed using the Isoclad Fire rated FireStop 10 and 12 system along with an Isoclad PIR Thermocore system.



PROJECT CRITERIA

The main criteria for this build were for the end user to be able to enjoy a panel system that offered a complete NO AIR LEAKAGE through the joints or perimeter of the structure as a gas suppression system was to be installed.

The Data Centre build also required a panel system that would be able to offer impressive U values with guarantees that the panel system would not create any sweating or condensation within the rooms.

The aesthetic finish of the wall panels was White Hygienic foodsafe graded steel. Isoclad were able to create an adventurous black intergalactic scape to the ceiling with an infinite effect complete with LED lighting to create the illusion of a starry night sky.

Isoclad recommended bespoke matt black steel 'infinity ceiling' which created a spectacular visual appearance within the installation.

The installation comprised of a split level ground floor and the first floor supported on a mezzanine. In total, 5740m² of fire rated Panels were used during the build internally and 3250m² of the FireStop 12-panel system used externally together with 2490m² of the Thermocore.

The installation was carried out by Isoclad's certified nominated approved installer.

