



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 MULTI-PURPOSE INSULATED PANEL SYSTEM FOR ANY ENVIRONMENT

The Thermocore panel has a Polyisocyanurate core and is manufactured from MDI Polyols and blowing agent (ODP Zero + GWP less than 5) to produce highly crosslinked polymers. This closed cell foam has an excellent thermal performance, good shear and tensile strength together with being very lightweight. These properties make the Isoclad Thermocore panels ideal for freezers and chilled storage.



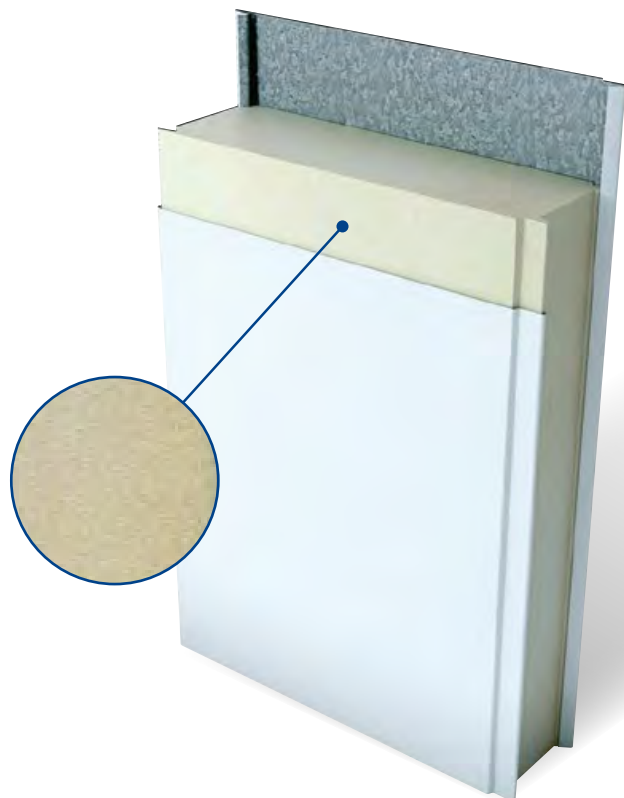
THERMAL EFFICIENCY

Lightweight fire rated non-combustible panels designed for internal linings and partitions for general industrial applications and low temperature environments.

Thermocore has a density of 40kg fully cured sanded and de-dusted, square and flat full boards of specified thickness.

SLAB PRODUCTION

Slab production allows for a much greater array of thickness, a superior surface flatness ($\pm 0.5\text{mm}$). As our Thermocore block is fully cured prior to processing, there is no opportunity for shrinkage or expansion of the material inside the panel, a phenomenon common with injected panels.



PANEL JOINTS



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TWO TYPES OF JOINTS

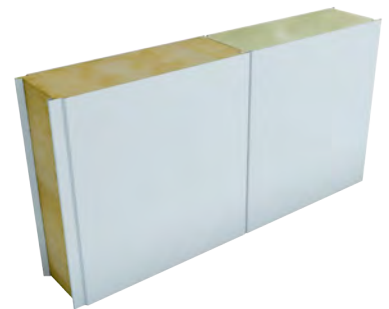
Isoclad manufacture panels with two types of joints: Standard Intaloc and Secret Fix.

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	High-performance pre-finished steel with aesthetic appeal. Readily available in most popular 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 all internal hygienic areas.	Standard white 25 micron painting system consisting of primer and polyester finish. Various colours available upon request.	A 7 micron epoxy paint primer that can be painted over as well as bonded with adhesive.



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

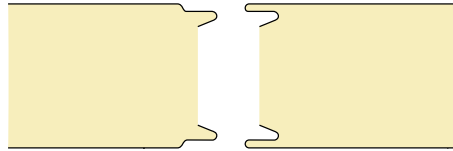


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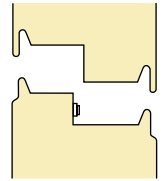
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Joint Detail

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



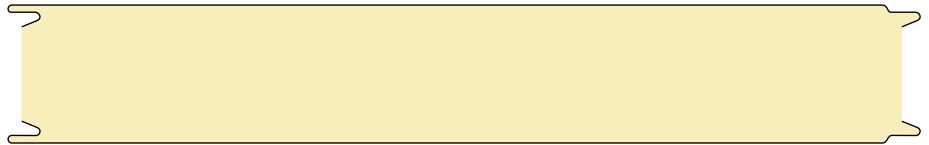
Secret Fix



Profiles (Not to Scale)

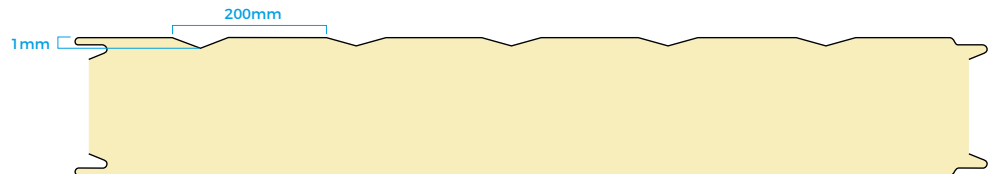
Flat

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.



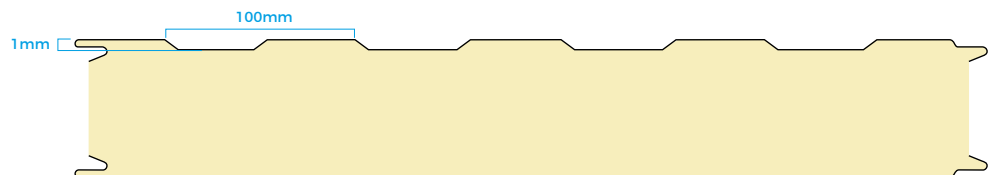
V-Rib

(Pitch 200mm - 5 per panel)



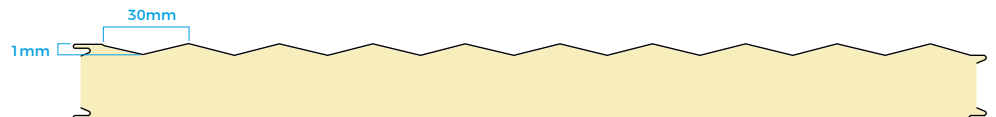
Castellation

(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:

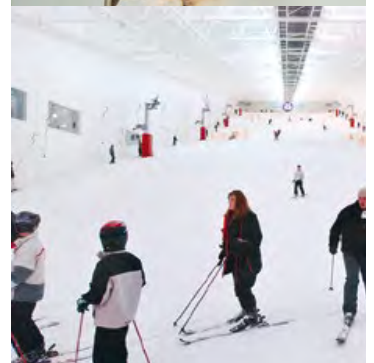
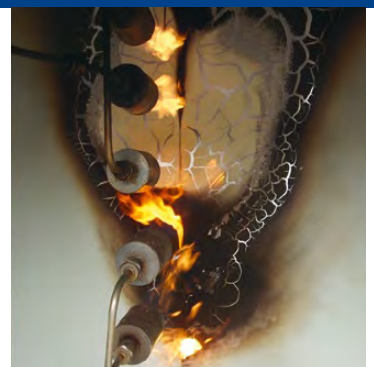
Integrity – the ability of a system to stop the penetration of hot gases and flames

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*
Thermocore Walls (Stitched)	100 - 149	46	41	3.00	-
	150	30	30	6.00	-
	150	60	30	4.00	-

Ceilings

Fire Ratings & Maximum Recommended Span

Panel	Thickness (mm)	Fire Resistance (mins)		Max Unsupported Span (m)	
		Integrity	Insulation	LPS 1208	BS476 Part 22*
Thermocore Ceilings (Stitched)	150	82	50	3.40	-

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

TECHNICAL SPECIFICATION

Notes

- Tables are Derived from CERAM Laboratory Test Data Ref (QT18518/2/JB) Carried out in January 2012.
- Load Tables show Unfactored Loads and are based on an elastic deformation limit of Span / 200
- Span data based on 0.5kN/m² uniformly distributed load (NOTE other manufacturers may quote a lower figures of 0.25)
- Reference should be made to BS EN 14509 2013 - Self Supporting Double Skin, Metal Faced Insulation Panels where appropriate.
- 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
Thermocore	5.8	7.9	10.0	10.4	10.8	11.3	11.8

Structural Ceilings

Maximum Recommended Span (m)

Core Thickness	50	75	100	125	150	175	200
Thermocore	4.4	5.2	6.0	6.7	7.5	8.3	9.2

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
Thermocore	9.7	10	11.0	11.9	12.9	13.8	14.8	15.7

Thermal Properties

Insulation Materials	Thermal Conductivity W/m ² c	40	50	75	100	125	150	175	200
Thermocore	0.022	0.55	0.44	0.29	0.22	0.18	0.15	0.13	0.11

THERMOCORE CASE STUDY

LEEMING BAR PROJECT

One of the UK top ice cream manufacturer's temperature controlled storage facility has benefited from the use of Isoclad's Thermocore panel system.

Consisting of a large chill area and three freezer rooms, spread over four floors, temperatures range within the storage facility from -50°C to 5°C with an external air temperature of between -12°C in the winter months to a maximum of 29°C in the summer months.

The manufacturer relied heavily on Isoclad's extensive experience in the freezer and cold storage construction sector to provide an accurate and up-to-date panel system that would allow the rooms to operate at a constant temperature without the risk of condensation sweating on either face while also giving assurances that the panel core wouldn't freeze up with reference to dew point.



OUR SOLUTION

Isoclad were able to provide a solution that created a secure and structurally sound external enclosure using the Thermocore core panel thicknesses ranging from 100mm to 150mm for internal walls and ceilings.

Having received much positive feedback from previous Isoclad projects, the Isoclad team recommended a system that would ensure the rooms remained working at a constant temperature while offering the perfect U Value solution

The aesthetic finish of the panel system was white dust Free class zero spread of fame steel Laminate.

The Thermocore system is compatible with most door, louvres, windows systems and associated ancillaries. On this occasion, Isoclad worked alongside a well-known door manufacturer to ensure that the doors were provided with the correct door furniture and at the exact dimensions to suit the on-site requirements.

The Leeming Bar project utilised a total of 12.722m² of the Thermocore composite panel system and was installed by an approved installation contracting team.

