

rainscreen support panel system



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If you would like any additional information on any of the topics highlighted in this technical manual or project specific technical information not included then please contact us and we would be happy to discuss your requirements.

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eurobond laminates

about us

Eurobond is the leading UK manufacturer of non-combustible cored internal and external wall and ceiling composite panels. The stone wool core offers a low environmental impact, robustness, tested fire resistance and minimum smoke in the event of a fire. The panel systems are designed to the highest standards and manufactured to consistent high quality to minimise risk through tested performance, proven installation methods and end of life disposal.

Eurobond offers a wide range of stone wool cored, architecturally flat composite wall and ceiling panels for both internal and external use.

All panel systems provided are tested and approved to Loss Prevention standard LPS 1181, LPS 1208 and Underwriters Laboratories standard AS E119-12.

The company continues to invest in product development, testing and manufacturing technology and operates two of the most technologically advanced panel production lines in Europe, producing consistent, high quality products to exacting tolerances. There is also a comprehensive technical advisory service to assist in the specification, detailing and installation of panel systems.



Waitrose, Exeter
Rainspan with Stone







our reputation
has been built
on quality over the
last 30 years

rainspan is the solution for clients, architects and contractors

Rainspan uniquely blends together the benefits of a composite panel and the flexibility of varying aesthetic rainscreens to provide greater freedom for architectural expression

Rainspan is a fully tested, robust, interlocking, stone wool core insulated panel, with two hour fire resistance even in long span conditions of up to 7.5 metres (LPS 1208). Rainspan uniquely blends together the benefits of a composite panel and the flexibility of varying aesthetic rainscreens to provide greater freedom for architectural expression.

Rainspan offers clients, architects and contractors a complete façade solution and the range of rainscreen options available provides real flexibility in terms of both design and appearance. It is fully tested with comprehensive details to ensure top performance for the life of the building.

Rainspan provides the perfect structural support for rainscreen systems, and combines ease and speed of installation to create a weather tight building envelope early on in the build programme.

It can remove the façade installation from the critical path and simplify the construction process and helps to reduce the cost and complexity of the façade support structure.

Design Flexibility

We have partnered with established businesses with tried and tested, well designed architectural façade systems. The range of options available provides real flexibility in terms of both design and appearance.

Each system is fully tested and comprehensively detailed to work as a building solution, which will continue to perform year after year.

Tested Performance

Rainspan finished wall construction has been tested for structural and weather integrity performance to CWCT standards and fire resistance tests conducted in accordance with BS EN 1364 Part 1 to ensure 'built in passive fire protection'

Rainspan with Urban Glass

Eurobond glass façade rainscreen system. High-quality, stylish, unique and plain elegant. More than ever the material glass is in demand for long-lasting structural quality and highest specifications.

A: Rainspan composite panel
B: support frame
C: metal cassette rainscreen

A

B

C



Rainspan with Urban Glass



History Museum, Hull
Rainspan with Terracotta

Rainspan with Terracotta

Eurobond terracotta architectural façade system. The visual impact of a timeless modern façade with the distinctive character of a natural terracotta in a ventilated rainscreen.

Rainspan with Brick Tile

Eurobond's brick tile composite rainscreen system combines the natural beauty of genuine brick with fast track installation



RILD
Rainspan with Brick Tile



Rainspan with Ceramic

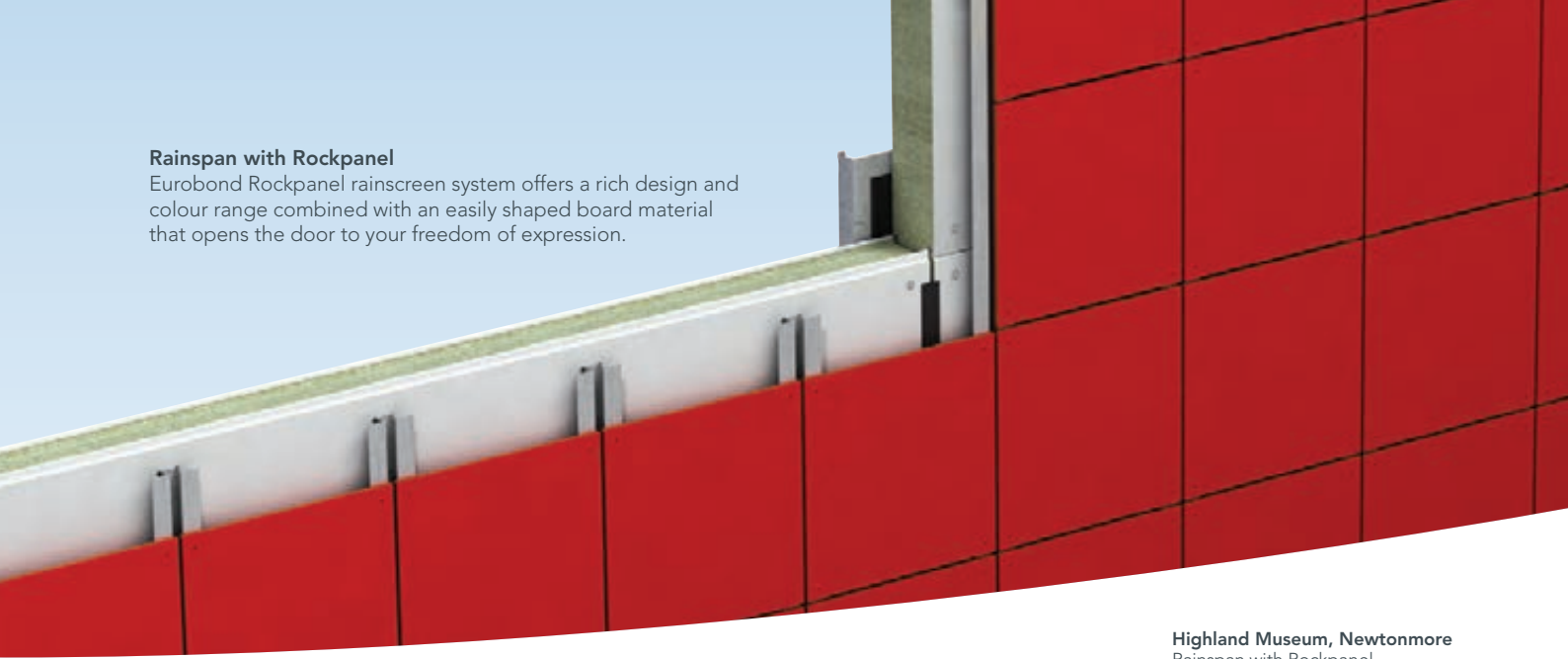
Rainspan with Ceramic

Eurobond ceramic rainscreen system offers an unsurpassed range of finishes in simulated stone and metallic effects, polished, honed and textured surfaces.



Rainspan with Rockpanel

Eurobond Rockpanel rainscreen system offers a rich design and colour range combined with an easily shaped board material that opens the door to your freedom of expression.



Highland Museum, Newtonmore
Rainspan with Rockpanel

Fast Track Construction

Rainspan is a proven modern method of construction and can provide significant cost and time savings over alternative methods. In order to substantiate likely cost savings for Rainspan compared to traditional blockwork and jumbo metal stud back walls an independent third party cost comparison was commissioned in 2014 with independent cost consultant Faithful + Gould. Rainspan systems were found to be the cheapest method of construction with cost savings of up to 40% per m².

Panel systems can also be constructed over 10 times faster, leading to the possibility of significant savings in construction programmes Rainspan's capability for long, fire-rated spans means that secondary steelwork costs can be kept to a minimum with fewer intermediate fixing supports.



Wakefield Railway Station
Rainspan with Stone

Rainspan with Stone

Eurobond stone tile architectural façade system comprises of a bonded and reinforced granite or stone tile, backed up with Eurobond's Rainspan panel system..



Rainspan with Timber

Eurobond timber architectural façade. The natural aesthetic of our timber façade can create unique building externals. It not only provides a warm natural finish to your building but can be installed with varying widths and profiled wood, giving the option of a textured façade profile.



Energy and environmental performance

The stone wool core at the heart of Rainspan is an excellent thermal insulator. In addition, the system has been independently tested for air tightness, achieving air permeability results of less than $1\text{m}^3/\text{hr}/\text{m}^2$ helping to reduce building operational costs and improve energy performance

Rainspan is manufactured with raw materials that have a high recycled content and to precise order requirements to ensure minimum on-site waste. At the end of a building's life Rainspan panels are fully recyclable.



Dobbies, Belfast
Rainspan with Timber



Atrium, Cardiff
Rainspan with Metal

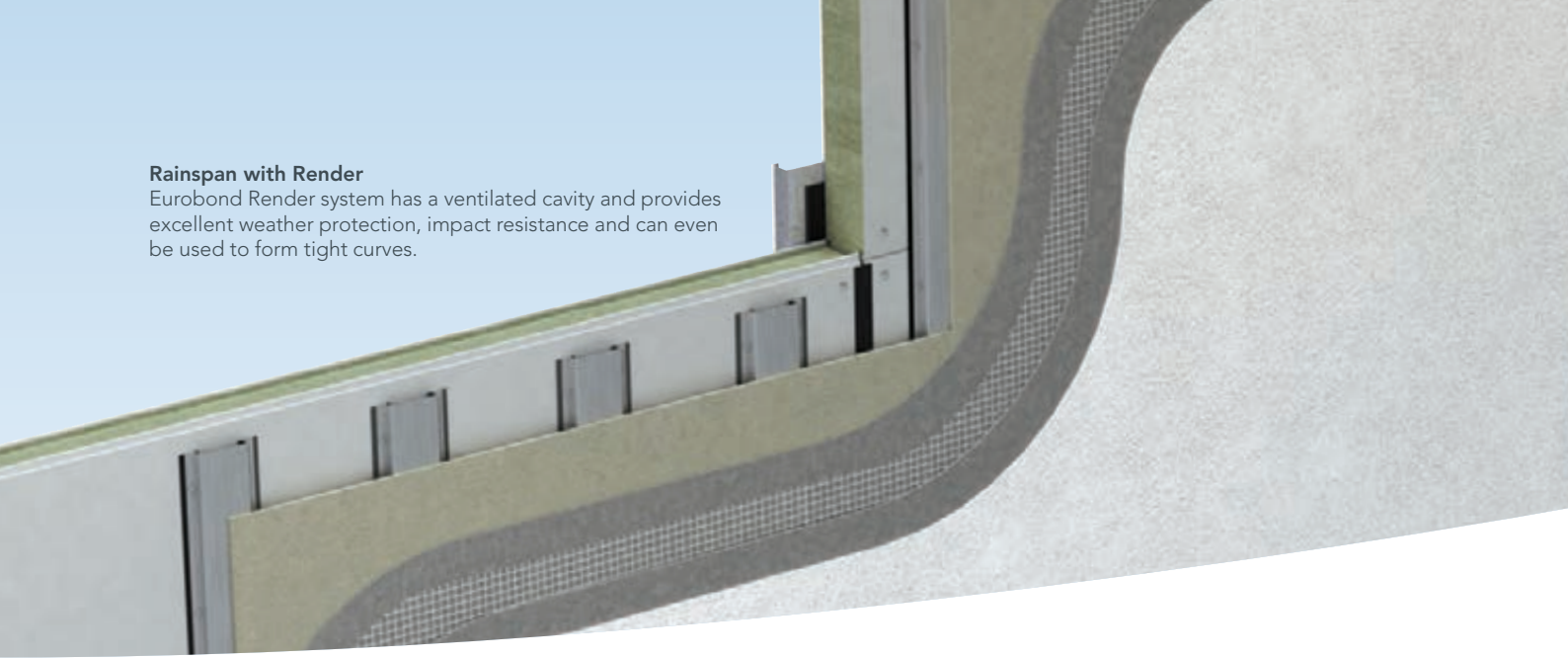
Rainspan with Metal

Eurobond metallic composite rainscreen system. The metal cassette façade can be supplied in an extensive range of finishes from natural metals, to stone to prismatic and everything in between.



Rainspan with Render

Eurobond Render system has a ventilated cavity and provides excellent weather protection, impact resistance and can even be used to form tight curves.



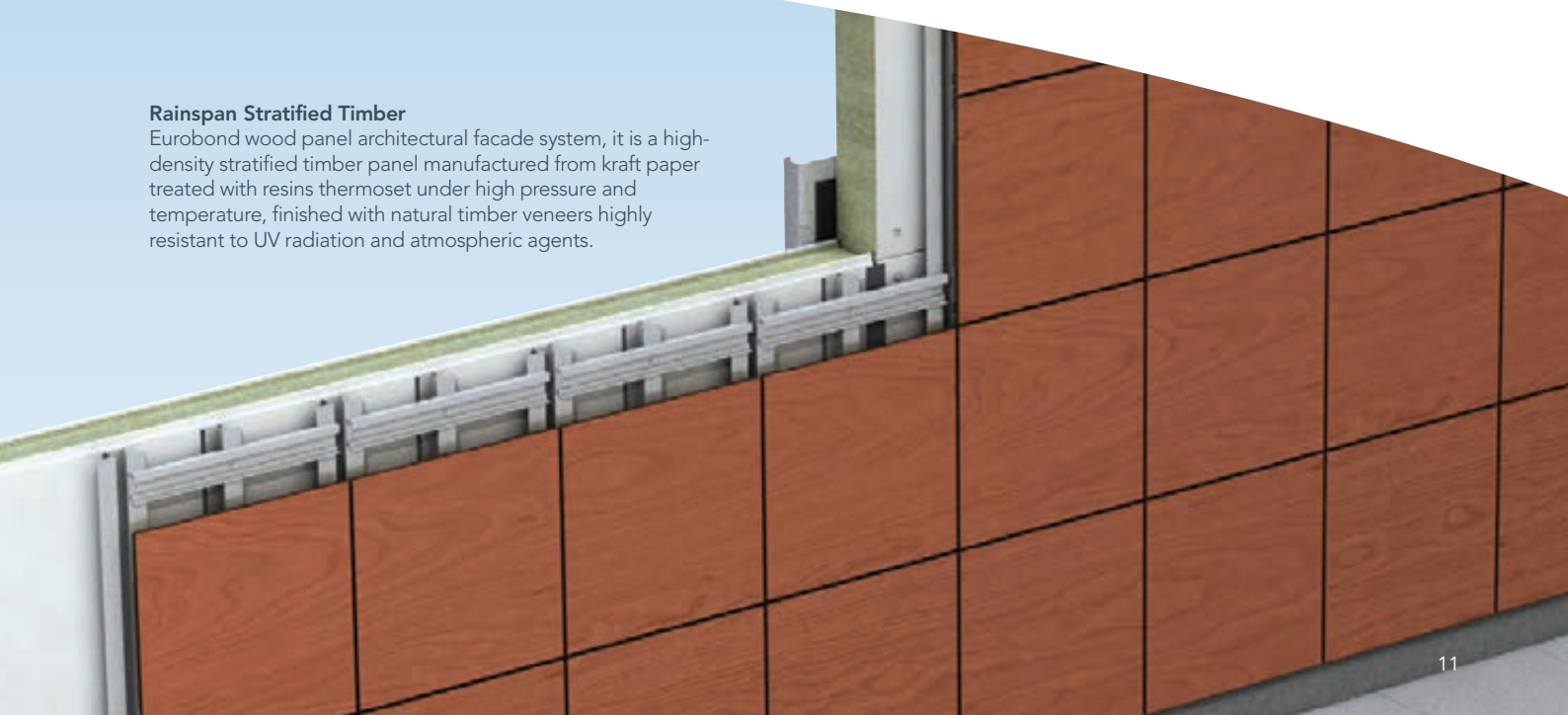
Minghella, Reading
Rainspan with Render

Rainspan with Stratified Timber



Rainspan Stratified Timber

Eurobond wood panel architectural facade system, it is a high-density stratified timber panel manufactured from kraft paper treated with resins thermoset under high pressure and temperature, finished with natural timber veneers highly resistant to UV radiation and atmospheric agents.



Inset: Gilmoos Recovery Centre
Rainspan with Timber

Be creative with rainspan



Glas-Man
Rainspan with Metal Cassette



The Factory
Europanel, Rainspan with Poly-carbonate

The design freedom provided by the Rainspan façade system is perfectly complemented by proven 'life-of-the-building' performance to offer a building solution that meets fast track construction techniques and the architectural excellence demanded from modern building envelopes.

Rainspan offers the architect an innovative and versatile solution and brings exciting new colour and texture combinations to the construction industry, with the reassurance that it is fully industry tested and approved. A wide range of materials, colours, shapes, textures and finishes is capable of creating a unique façade

Rainspan opens the door to architectural flexibility ensuring that challenging designs are easily reproduced and can create unique building externals suitable for a range of building types, from one-off iconic designs to modern commercial developments.

Eurobond has a dedicated team of technical services and support engineers, with expert knowledge to provide guidance at all stages of the design and construction process to ensure the breadth of creativity offered by Rainspan delivers buildings that exceed expectations.



Asda, Leicester
Rainspan with Timber

NRG Panel

The NRG option is available across the Rockspan panel range. It uses a special Colorcoat® High Reflect by Tata Steel internal steel face that maximises daylight and reduces the requirement for artificial lighting.

The result is lower light energy bills for the life of the building, a reduction in the CO₂ footprint and a positive contribution to material credits in a BREEAM assessment. The NRG option is available in a wide range of finishes that combine aesthetics, functionality and performance.

The new NRG panel option offers:

- ≥85% reflectance, reducing the amount of energy required to achieve the same level of lighting.
- Significantly reduces CO₂ emissions helping to achieve compliance with tightening regulations.
- Can improve daylight factor by 10%.
- Possible energy savings of up to 12% per annum.*

* Based on 4000m² building, daytime operation. Based on SBEM Calculation under NCM conditions for Part L compliance. [Payback for 24 hour operation is ≤ 1.5 years] Colorcoat High Reflect® used for wall and ceiling.



Self Storage, Cheswick
Rainspan with Metal Cassette



Be creative with rainspan

Rainspan with Stratified Timber

Nestle, Germany
Rainspan with Terracotta Tile

Be creative with rainspan

Rainspan with Stratified Timber

St Helens RFC, Langtree Park
Rainspan with Metal Cassette



Barnsley Academy
Rainspan with Terracotta Tile



Prestatyn Retail Park,
North Wales
Rainspan with
Stratified Timber

structural performance

Eurobond's panels offer exceptional spanning characteristics resulting from the composite action of the metal facings bonded to a high density structural stone wool core. Development and testing allows Eurobond panels to be used to span up to 12m*.

Using panels that can span up to 12m means that secondary steelwork can either be eliminated or significantly reduced allowing the following benefits:

- Cost savings for steelwork.
- Reduction in build programme.
- Cleaner, uncluttered internal appearance.

The only significant constraints on the length of the panel are handling considerations, wind pressure and suction.

Wind loads are dependent on the building location and dimensions. The calculation of the wind loads, as laid down in Eurocode 1 (EN 1991 1.4), is a complex and demanding procedure for which Eurobond offer an advisory service to technically verify and model buildings and locations to calculate spanning capability.

*Dependant on project/
building environment spans
in excess of 12m is possible.
Please contact Eurobond
technical department for
project specific information.

Please contact our technical department who will be happy to provide detailed span information based on your project needs.

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fire performance

All Rainspan composite panels offer high levels of fire resistance and have been tested and approved by the Loss Prevention Certification Board (LPCB) and Underwriters Laboratories (UL). The following table details the panel specifications and fire performance achieved.



Product	Panel thickness (mm)	Fire resistance (minutes)		Maximum unsupported length (m)	LPS 1181 Grade
		Insulation	Integrity		
Rainspan	50	-	-	-	-
	75	60	60	3.0	EXT-A60
	100	30	30	7.5	EXT-A30
	100	60	60	6.0	EXT-A60
	100	120	120	5.5	EXT-A120
	125	30	30	7.5	EXT-A30
	125	60	60	6.0	EXT-A60
	125	120	120	5.5	EXT-A120
	150	120	120	7.5	EXT-A120
	175	180	180	-	-
	200	120	120	7.5	EXT-A120
	240	120	120	7.5	EXT-A120

Fire performance spans are subject to wind load verification. All panels can be fitted horizontally or vertically.

Non-Combustible Core

All panels have stone wool cores which are non-combustible as defined by the Building Regulations applicable to all parts of the United Kingdom and the Republic of Ireland. This includes materials classified as Class A1 in accordance with BS EN 13501-1: 2002 Fire classification of construction products and building elements – Part 1: Classification using test data from reaction to fire tests, when tested to BS EN 13501-1:2002.

sustainability and environmental performance

Eurobond delivers on its brand promise of low environmental impact from raw material sourcing, efficient manufacturing and market leading product performance, minimum waste and a proven recycling option at the end of a building's life.

The Eurobond philosophy is one of continual improvement, striving to manufacture and deliver to customers the most environmentally responsible and sustainable products. Key to this is establishing, implementing and maintaining an Integrated Management System which complies with the requirements of ISO9001:2008, ISO14001:2004 and BES 6001.

Whilst sustainability and 'green' credentials have become more important considerations in recent years it is not always easy to validate the claims companies make about their performance and that of their products. Eurobond's aim is to make specifying the most sustainable products simpler and more transparent. To this end it has implemented BES 6001 Responsible Sourcing of Construction Products standard that independently demonstrates that a building material has been produced in a way that has minimised its environmental impact and is sustainable. Eurobond is the first UK composite panel manufacturer to achieve this standard.

BREEAM

The BREEAM family of assessment methods and tools are designed to help construction professionals understand and mitigate the environmental impacts of the developments they design and build. When the building has been evaluated through BREEAM, the building owner, developer, and/or occupant may use the assessment rating to demonstrate the sustainability performance of their building in the marketplace.

The environmental credentials of Eurobond's products ensure that, within the materials section of BREEAM assessment, buildings are given an ideal start to achieve a high rating. Responsible sourcing is becoming more important and this is also reflected in the latest version of BREEAM, which now awards extra credits for products that have been assessed to BES 6001

End of Life Solutions

The raw materials used in the manufacture of Eurobond composite panels have a high content of recycled materials and this helps to minimise the environmental impact of construction, reducing carbon emissions by diverting materials from landfill and limiting the depletion of finite natural resources. At the end of a building's life Eurobond composite panels offer a 'Cradle to Cradle' approach to recycling where materials are recycled in a closed loop. This maximises material value whilst minimising the damage to ecosystems - products are used, recycled and reused again without losing any material quality.

In independent tests WRAP [Waste & Resources Action Programme] found Eurobond's products are fully and independently recyclable, allowing new stone wool cored composite panels to be made diverting waste from landfill

If you would like further information on the performance credentials of Eurobond's panels please contact our technical team.

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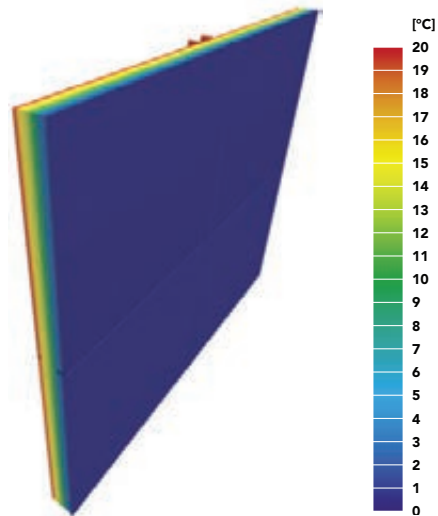
www.eurobond.co.uk



thermal and acoustic performance

Thermal Performance

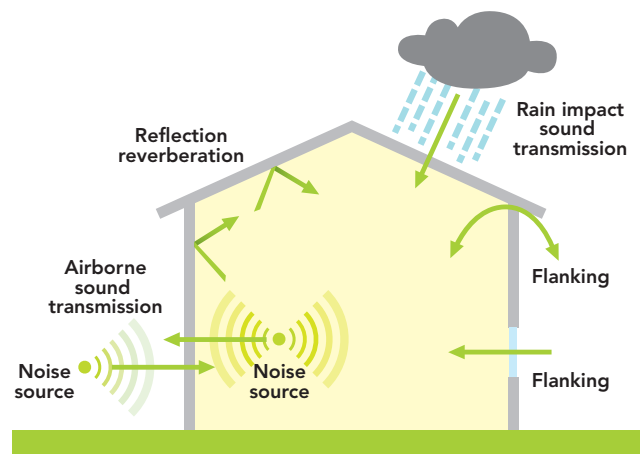
Eurobond panels have been specifically designed to meet the 'as built' thermal requirements of the Building Regulations and/or Technical Handbooks in England and Wales, Scotland and Northern Ireland.



Typical example of a Trisco Thermal Model for Rainspan

Acoustic Performance

As buildings all need some form of acoustic control to meet specific client and/or regulatory requirements (Building Regulations Approved Document E), the following guidance is intended to provide the architect, designer, acoustic engineer and end user with qualification of Rockspan performance in England and Wales, Scotland and Northern Ireland.



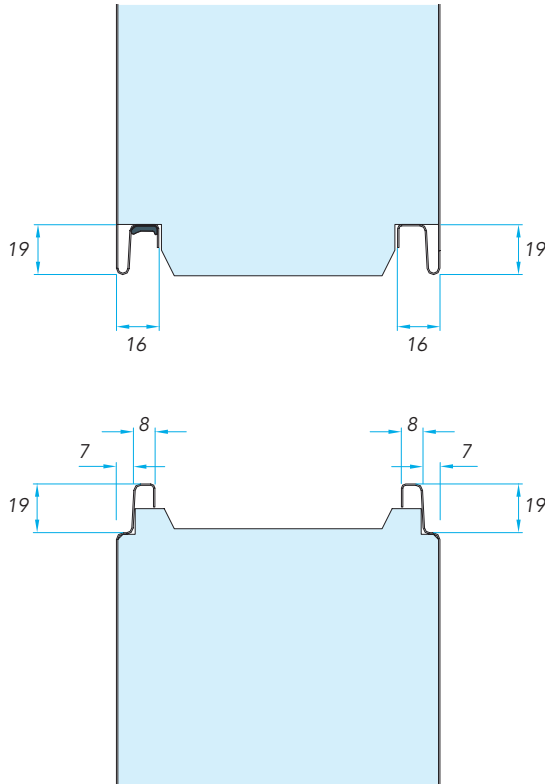
U-value and R-value calculations

Core Thickness (mm)	Rainspan	
	U value (W/m ² K)	R value (W/m ² K)
50	0.69	1.25
75	0.54	1.85
100	0.40	2.50
125	0.33	3.03
150	0.27	3.70
175	0.23	4.35
200	0.20	5.00
240	0.18	5.55

Weighted Sound Reduction index Rw (dB)

Core Thickness (mm)	Weighted Sound Reduction Rw (dB)
	Rainspan
50	30
75	31
100	33
125	33
150	34
175	35
200	36
240	36

weights, dimensions and tolerances



Standard Specification

1200mm module width

Standard White RAL9010
Colorcoat Prisma® by Tata Steel
external face 0.7mm gauge

Architecturally Flat profile

Rainspan - 120kg/m³ density

White Polyester lining 0.7mm gauge

Panels less than 1.8m long can be supplied and are subject to an extra charge

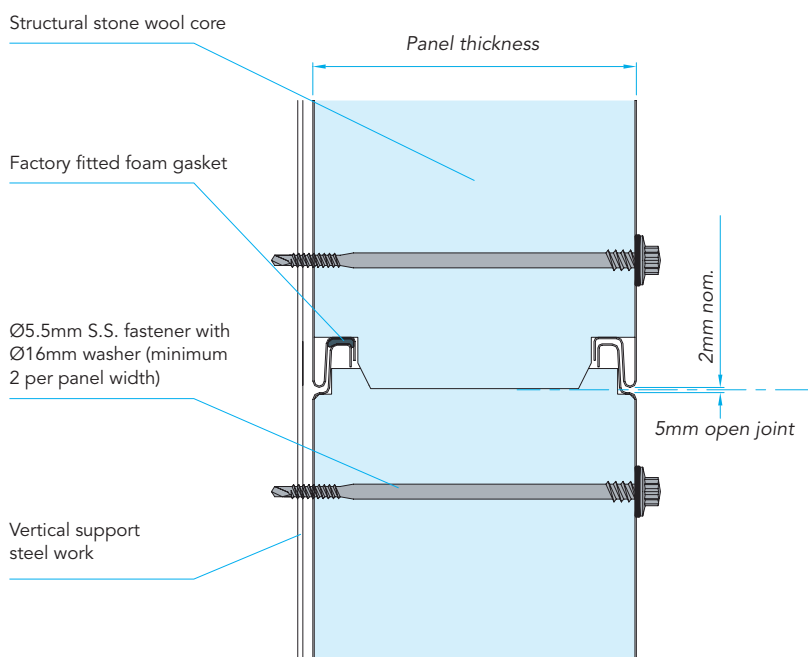
All panel lengths subject to technical verification

Tolerances

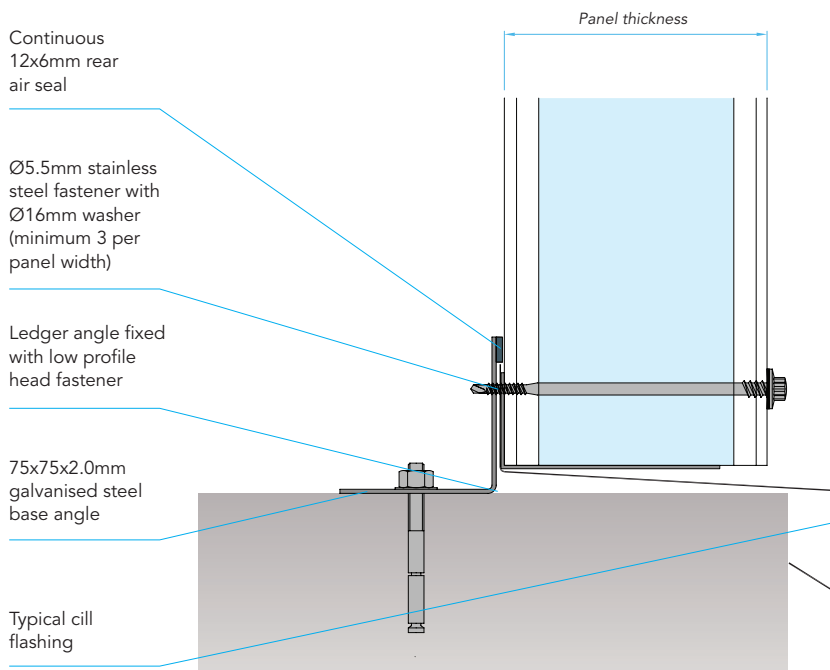
Length	±10mm
Width	±1 mm
Thickness	±2mm
Corners (leg length)	±3mm
Flatness	1.5mm from the theoretical flat plane over a distance of 700mm
Joint gap	±2mm

Weights

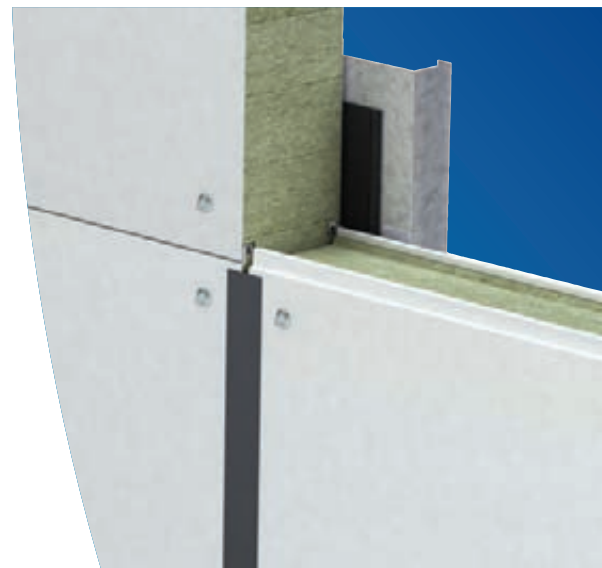
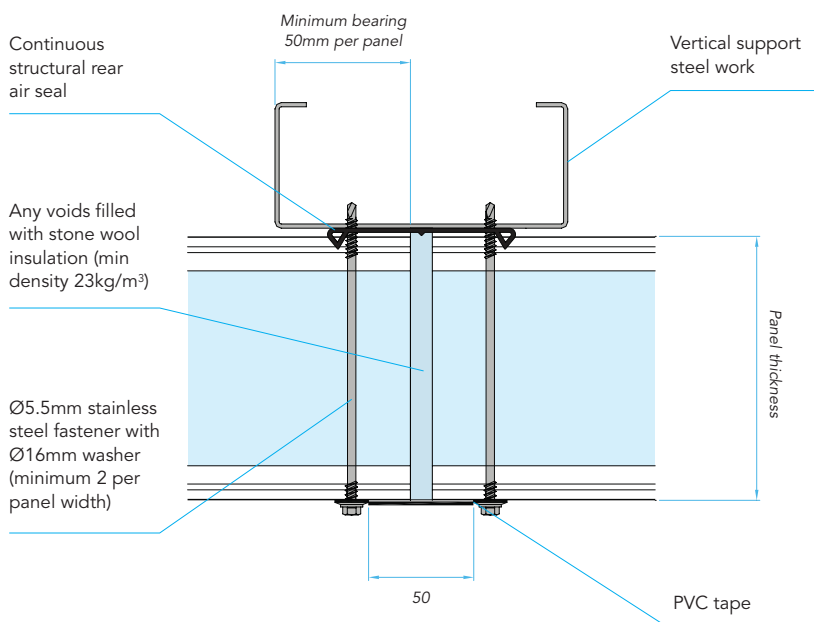
Core Thickness (mm)	Weight: kg/m ²
50	16.2
75	19.2
100	22.2
125	25.2
150	28.2
175	31.2
200	34.2
240	39



vertical joint detail RSPV-05A



vertical joint detail RSPH-02A



standard details

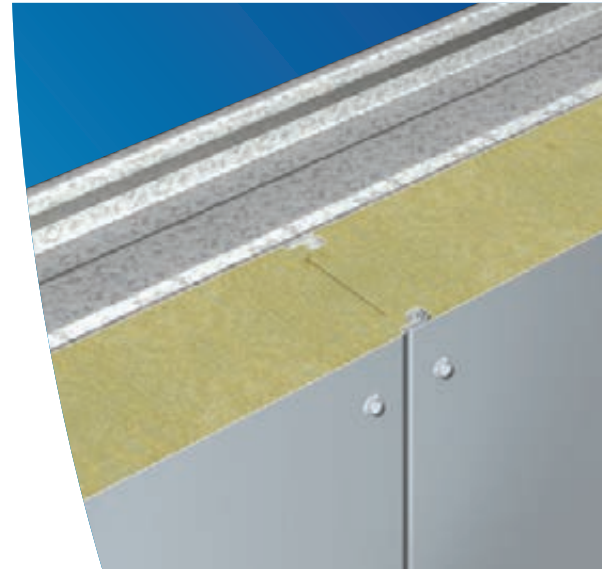
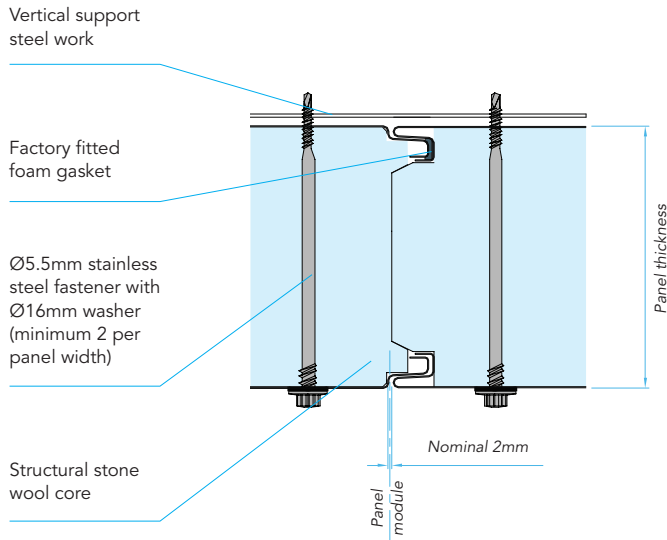
rainspan vertically laid

Eurobond have a comprehensive library of standard details and BIM files that cover Rockspan in both horizontal and vertical applications.

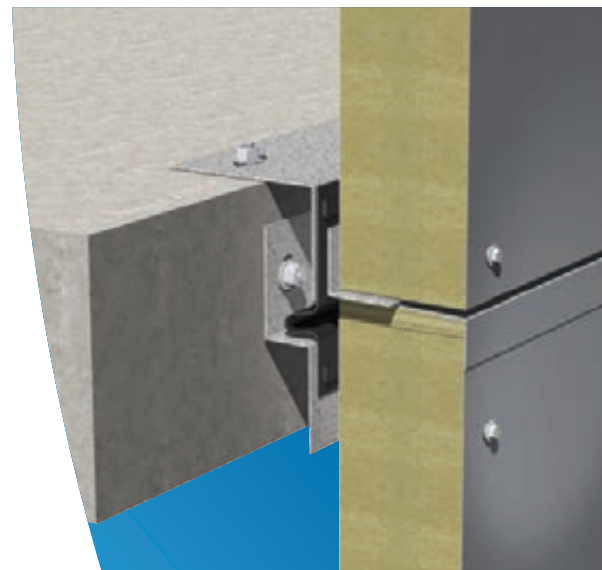
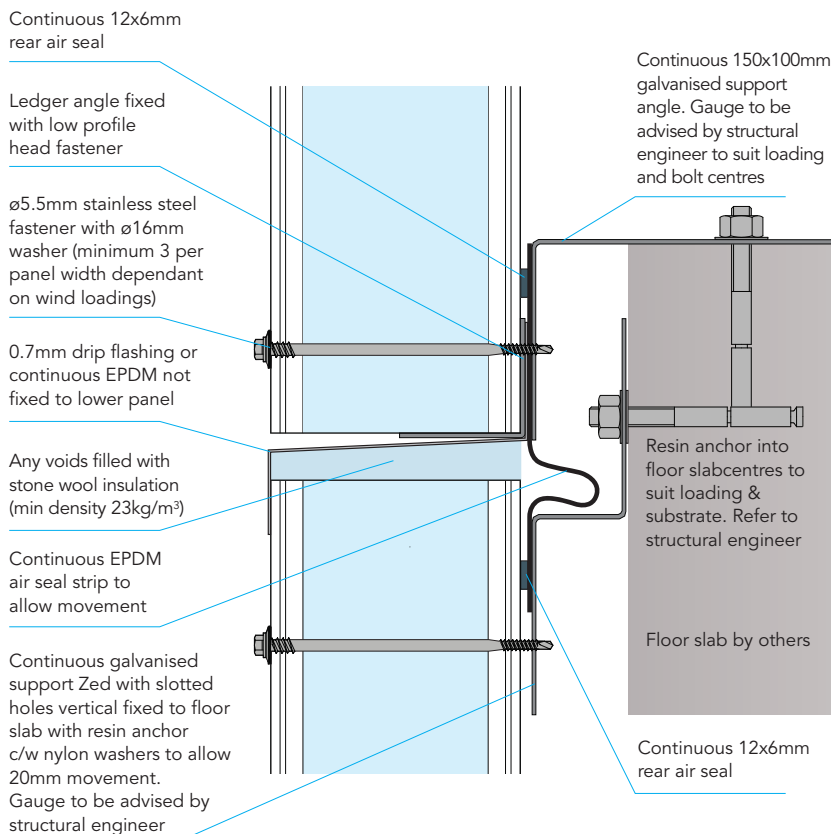
NB: Always check www.eurobond.co.uk for the latest version of any drawing. Available as PDF files and DWG format to allow them to be directly imported into project-specific drawings.



vertical joint detail RSPV-01A



vertical joint detail RSPV-02A



standard details

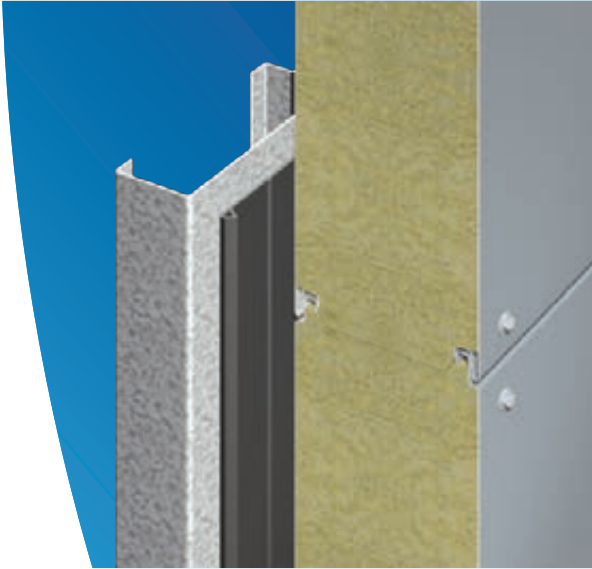
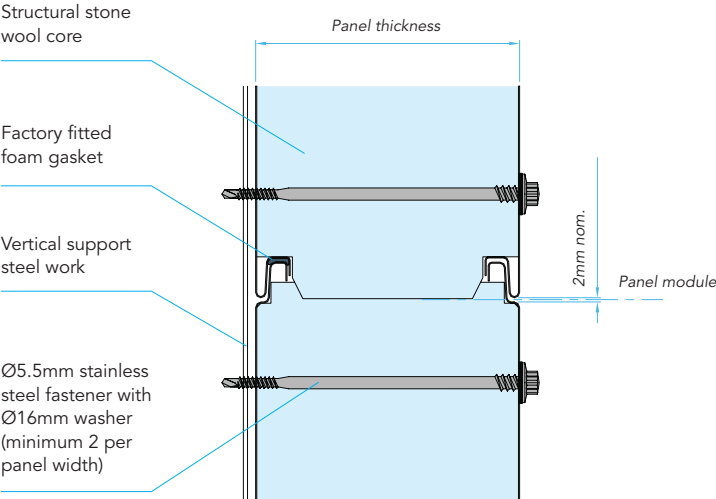
rainspan horizontally laid

Eurobond have a comprehensive library of standard details and BIM files that cover Rockspan in both horizontal and vertical applications.

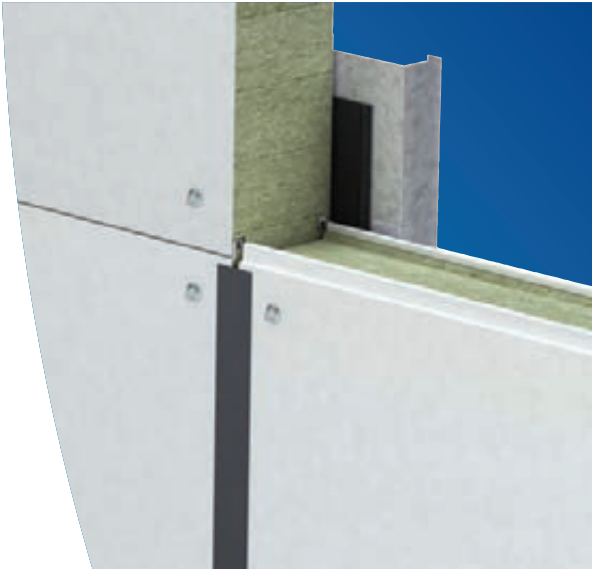
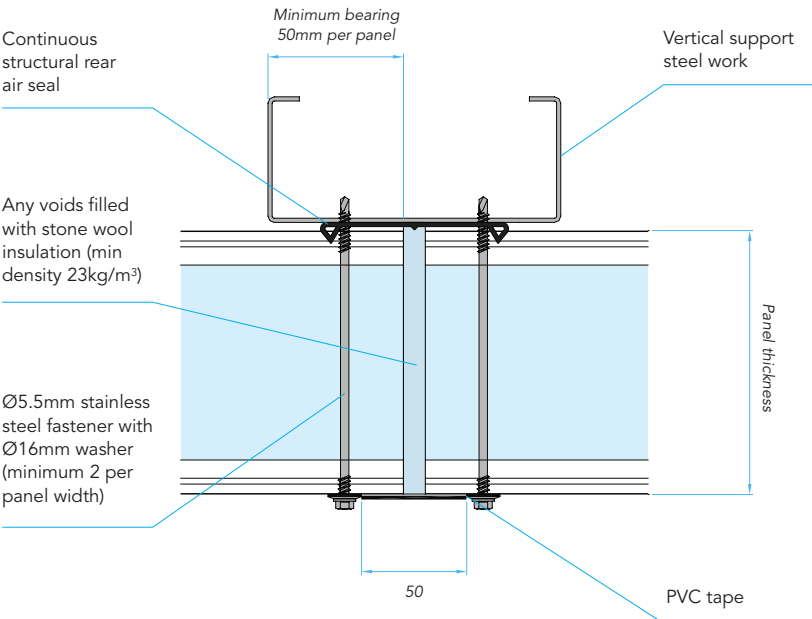
NB: Always check www.eurobond.co.uk for the latest version of any drawing. Available as PDF files and DWG format to allow them to be directly imported into project-specific drawings.



horizontal joint detail RSPH-01A



horizontal joint detail RSPH-02A



ancillaries fasteners

Eurobond recommend that fasteners should be stainless steel, the exact specification depends upon pane thickness and the gauge of steel work to which the panels are to be positively fixed.

Specifiers can choose from a wide variety of proprietary fasteners and should refer to the manufacturers' literature for the full range of available products.

Most of the fasteners used for metal cladding applications are self-tapping and self-drilling, although self-tapping only screws are also available.

Fasteners can generally be divided into two categories: Primary fasteners transfer the loads from the cladding to the primary and/or secondary steelwork. Their main function is, therefore, structural.

Secondary fasteners are used to form the interface between additional features and the panel face (e.g. flashings; rails to carry Rainspan architectural façades).

Please note Eurobond do not supply fasteners but you can contact our technical department who will be happy to provide recommended fastener types

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While their primary purpose is to provide a weathertight seal at the joint, their structural properties may be used to provide lateral restraint and to transfer load.

Visible fasteners have the option of factory coloured plastic heads to suit the weathered sheet.



bim

Eurobond has BIM files available for its range of stone wool core internal and external wall and ceiling composite panels. It includes material colours and COBie datasheet parameters and the designer is supported by a wide range of construction details.

The files are available in a number of file formats.

Available at eurobond.co.uk/bim or by contacting Eurobond Laminates Technical Service team on **02920 776677**

technical@eurobond.co.uk

technical service and support

Eurobond provides a comprehensive Technical Service which can assist in correct specification, detailing and installation of panel systems.

Eurobond provides a comprehensive Technical Service which can assist in correct specification, detailing and installation of panel systems.

In depth fire performance knowledge.

Eurobond has extensive knowledge of the performance of composite panels in fires developed over many years from a wide range of standard and bespoke fire tests as well as working closely with leading fire engineers.

This allows us to:

- Provide guidance in selecting the most appropriate products to achieve the required fire performance.
- Provide correct detailing for each product.
- Advise on the Building Regulations and insurance company specific fire requirements.

All Eurobond products are:

- Zero ozone depleting potential and zero global warming potential.
- Full Life Cycle Assessed contributing to excellent chance of achieving a high rating in a BREEAM assessment.
- Assessed to BES 6001 Responsible
- Sourcing of Construction Products, ISO 9001:2008 and ISO14001:2004.
- Fully compliant with relevant Building Regulations and Technical Handbooks.
- High in recycled material content.
- Fully recyclable at end of life.

Training

Highly experienced site engineers are available to carry out site training. There is also a comprehensive range of training courses at either customer premises or at the factory in Cardiff.

This includes:

- Product application and installation training to ensure the correct specification and use of Eurobond products.
- Pre-installation project guidance.
- Project detail confirmation.
- Sign-off and project completion reports.

Eurobond research and development staff are continually seeking to improve the performance of existing products and develop new ideas. Experience gained through research and development allows Eurobond to speak with authority on the performance of its panel systems, confident in the knowledge that advice given is based on information gained through testing, prototyping and practical experience.

Members of Eurobond's Technical Department are available to attend site meetings to provide expert technical advice at the design stage, during installation and post-installation.

Sales team

Regionally based sales and product specialists are available to provide advice, presentations and one-to-one service.

Project Specific Design Advice

As well as the standard information and range of details available, project specific information can be developed to cover:

- Load/span calculations.
- Thermal and acoustic calculations.
- Bespoke CAD details.
- NBS Specifications.
- Project specific wind load modelling tool.
- BIM.



Colorcoat® by Tata Steel

products & services

The Colorcoat® brand provides the recognised mark of quality and metal envelope expertise exclusively from Tata Steel. For 50 years Tata Steel has developed a range of technically leading Colorcoat® pre-finished steel products which have been comprehensively tested and manufactured to the highest quality standards. Tata Steel supply pre-finished steel to normal and special tolerances according to EN 10143:2006 to ensure that the cladding performs as designed. The Colorcoat® products are supported by a range of services such as comprehensive guarantees, colour consultancy and technical support and guidance.

To ensure the long-term performance and appearance of the building, it is important that the pre-finished steel product is specified alongside the cladding system. To secure the peace of mind that comes from a rigorously manufactured and tested product from Tata Steel, ensure Colorcoat® as well as the individual product name is specified for your cladding system e.g. Tata Steel Colorcoat HPS200 Ultra®.

Colorcoat HPS200 Ultra® by Tata Steel

Colorcoat HPS200 Ultra® by Tata Steel provides exceptional performance and corrosion resistance for building envelope applications.

It is backed up with extreme testing and real world global data to demonstrate the best combination of excellent colour stability, gloss retention and outstanding durability.

Key benefits include:

- Optimised Galvalloy® metallic coating for exceptional corrosion resistance and cut edge protection.
- Surpasses requirements of Ruv4 and RC5 as per EN 10169:2010 proving excellent colour and gloss retention and corrosion resistance.
- Scintilla® embossed as a mark of authenticity from Tata Steel.
- Made in the UK for a lower carbon footprint.
- Certified to BES 6001 Responsible Sourcing standard.
- Exceeds requirements of CPI5 as per EN 10169:2010 demonstrating excellent barrier properties when used internally.
- BBA certified for durability in excess of 40 years.
- Double sided option providing a robust barrier on the reverse side of the steel substrate for buildings with demanding internal and external environments.
- Fully recyclable with full product traceability and REACH compliance.

Colorcoat Prisma® by Tata Steel

Colorcoat Prisma® is technically and aesthetically superior pre-finished steel that represents the ultimate combination of durability and aesthetic appeal. As such, it provides the designer with the freedom to create architecturally striking buildings with exceptional performance, that meet the desired functionality of the building.

Key benefits include:

- Contemporary colours including solids, metallics and matt shades providing an optically smooth finish for modern designs.
- All colours surpass requirements of Ruv4 and RC5 certification as per EN 10169:2010 proving outstanding colour retention and corrosion resistance.
- Optimised Galvalloy® metallic coating for ultimate corrosion resistance and cut edge protection.
- BBA Certification in excess of 40 years for all colours, providing independent verification.
- Reverse side branding making traceability easy, so you can rest assured that your building is protected with the highest quality from Tata Steel.
- Ideal when used in integrated renewable energy generation systems. Colorcoat Prisma® is proven to provide superior solarthermal absorption capability and excellent durability when used as a collector for active solar air heating solutions.
- Double sided capability for rainscreens and rainwater goods where double sided protection is required.

TATA STEEL



Colorcoat® by Tata Steel services

Repertoire®

The Repertoire® Colour Consultancy can advise on colours and colour strategies using a range of standard shades, as well as discussing individual bespoke colour requirements. With a minimum order quantity of 2500 m² Tata Steel can match almost any solid colour from physical swatches to commonly used references standards. Available in Zone 1 and Zone 2 areas in Europe with Colorcoat HPS200 Ultra® and Colorcoat Prisma®. For more information visit www.colorcoat-online.com/repertoire

Colorcoat® Technical Papers

Tata Steel have published a wide range of technical papers to independently guide and advise you on key issues in building design and construction commonly considered for roof and wall cladding systems using Colorcoat® products. From acoustics and air-tightness to low carbon design, gauge tolerance and fire performance, there is a technical paper that will help you find a solution. Visit www.colorcoatonline.com/technical to download the papers.

For more information about Colorcoat® by Tata Steel products and services visit www.colorcoat-online.com

Colorcoat, Colorcoat Connection, Colorcoat HPS200 Ultra, Colorcoat Prisma, Galvalloy and Repertoire are registered trademarks of Tata Steel UK Limited.

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