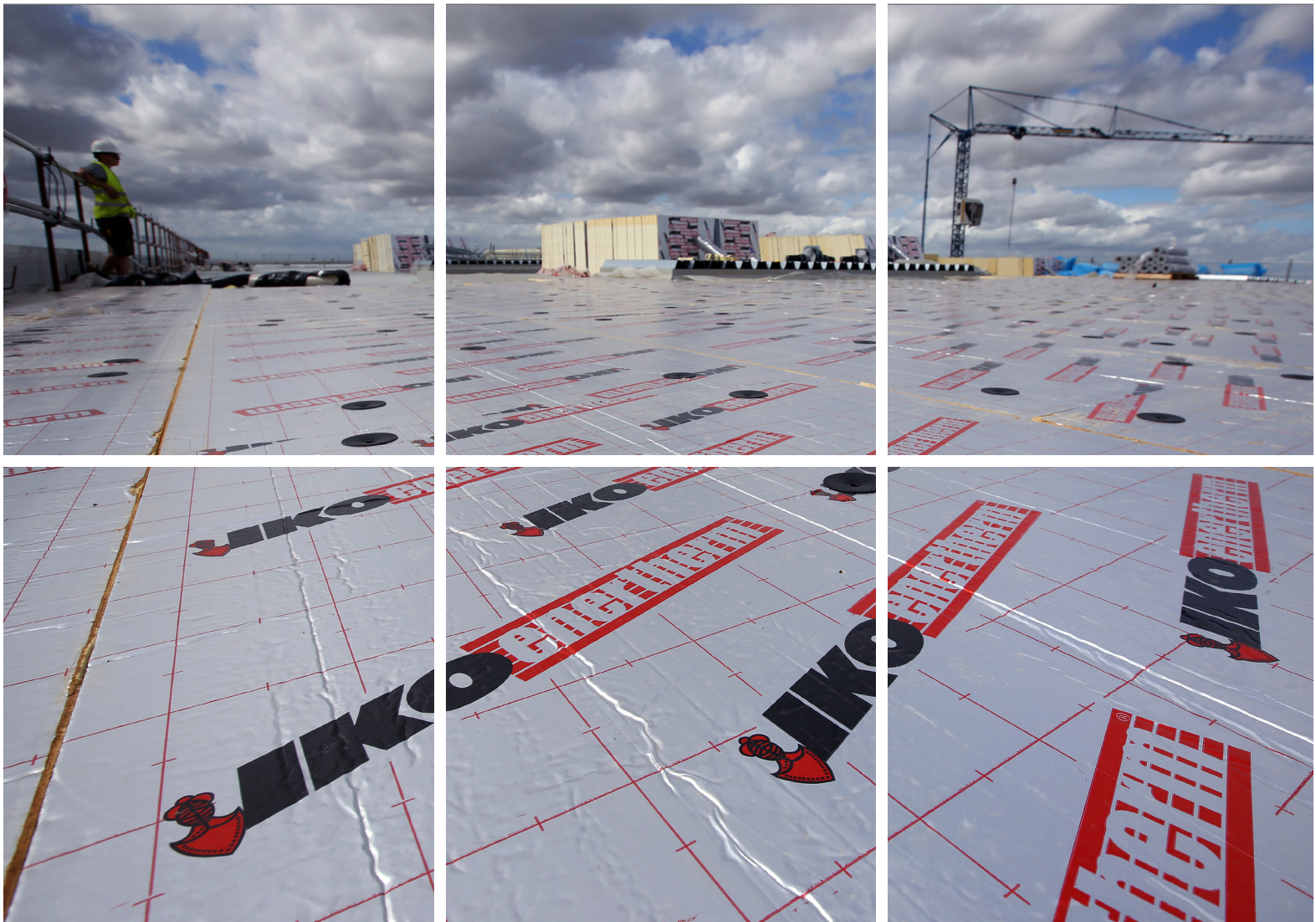


IKO Insulation



Systems for Flat Roofs and Inverted Roofs,
Balconies and Walkways



System Selector



Modern buildings are designed to do more than just protect the occupants from the elements. They also need to keep them at a comfortable temperature, maximising energy used for heating and minimising the impact on the environment.

The same goes for roofing. This is why IKO are a global player in insulation, producing a range of options suitable for every type of flat roof system; reinforced bitumen membranes, mastic asphalt, hot melt and single ply - whatever the specification, the IKO range of insulation products can match it. But more importantly, our insulation also matches whatever thermal performance you need to meet ever-more stringent regulations.

| IKO Systems | Product Type | Roof Type | Membrane Application | Thermal Conductivity | Compressive Strength | Page |
|-------------------|--------------|-----------------------------------|---|----------------------|----------------------|------|
| IKO enertherm ALU | PIR | Flat Roof | Self-Adhesive reinforced bituminous membranes | 0.022 | 175 | 3 |
| IKO enertherm BGF | PIR | Flat Roof | Torch-applied reinforced bituminous membranes | 0.026 | 150 | 4 |
| IKO enertherm MG | PIR | Flat Roof | Adhered reinforced bituminous membranes | 0.026 | 150 | 4 |
| IKO enertherm XPS | XPS | Inverted Roof | / | 0.033 | 300 | 5 |
| IKO enertherm VIP | VIP | *Inverted Roof, Balcony & Walkway | / | 0.008 | 160 | 6 |

*Where the lack of construction depth or space is an issue

All IKO Insulation Boards can be used over a suitable IKO Vapour Control Layer on substrates such as profiled metal decking, timber panels, screeded concrete, or in accordance with any IKO roofing specification.





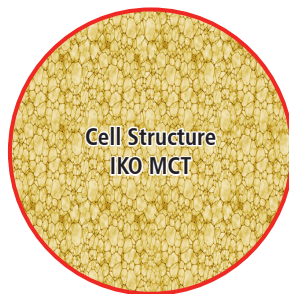
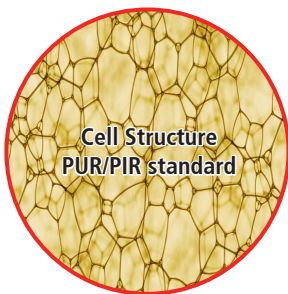
IKO enertherm, high performance insulation systems

IKO insulation boards are made from lightweight, fire resistant, 100% CFC, HCFC or HFC-free insulation board with a rigid polyisocyanurate (PIR) foam core.

IKO enertherm has an exceptionally fine cell structure, Micro Cell Technology (MCT) which gives it unique characteristics.

The highly efficient closed cell structure has a low thermal conductivity and easily achieves required U-values with a minimum thickness, high compressive strength and dimensional stability.

Zero global warming and zero ozone depletion potential.



System Benefits

- Agrément Certificate 15/5283
- Fire performance polyisocyanurate foam core
- Mineral glass or composite aluminium facings available
- Lightweight and easy to handle
- Less volume for the same high insulation value/low thermal conductivity
- Fit for walking on during the work and after
- Rot proof, durable and maintenance-free
- Ideal for meeting increasingly demanding Building Regulations and Part L requirements
- Tapered/cut-to-falls boards also available

| Insulation Board Edge Finishes | | |
|--------------------------------|-------------|----------------------|
| | | |
| Straight | Rebate (SP) | Tongue & Groove (TG) |

IKO enertherm ALU

IKO enertherm ALU is used for the insulation of flat roofs for new or refurbishment projects on concrete, steel deck and timber substrates.

Designed for self-adhesive reinforced bituminous membranes.

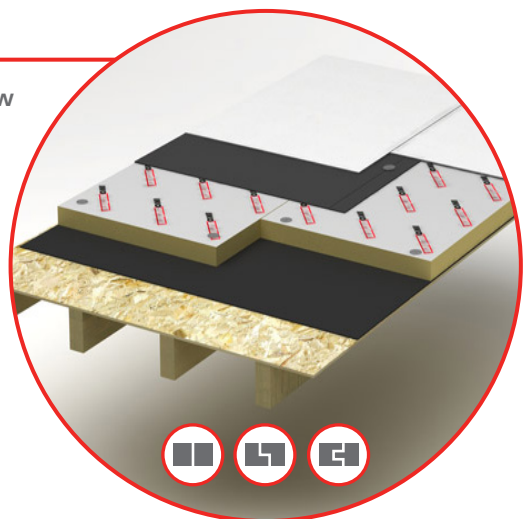
Both sides of the insulation board are clad with a multi-layer gas-tight aluminium construction. This high-quality reflecting ALU cladding consists of no fewer than seven layers, combined into a single construction. It is tested under extreme conditions regarding water absorption, mechanical properties, corrosion resistance and emissivity.

Details

- Thermal conductivity: thermal conduction coefficient: (EN 13165) λD: 0.022W/(m.K)
- Compressive strength at 10% deformation: ≥ 175 kPa

Thermal Resistance Rd-value (m². K/W)

| IKO enertherm ALU (mm) | 30 | 40 | 50 | 60 | 70 | 80 | 90 | 100 | 110 | 120 | 140 | 160 | 180 | 200 |
|------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1,200 x 600 mm | 1.35 | 1.80 | 2.25 | 2.70 | 3.15 | 3.60 | 4.05 | 4.50 | - | 5.45 | 6.35 | 7.25 | 8.15 | 9.05 |
| 1,200 x 1,000 mm | 1.35 | 1.80 | 2.25 | 2.70 | 3.15 | 3.60 | 4.05 | 4.50 | - | 5.45 | 6.35 | - | - | - |
| 2,400 x 1,200 mm | 1.35 | 1.80 | 2.70 | 3.15 | 3.60 | 4.05 | 4.50 | 5.00 | 5.45 | 6.35 | - | - | - | - |



IKO enertherm BGF

IKO enertherm BGF is used for the insulation of flat roofs, preferably in a torched application in combination with bituminous and plastic membranes.

Designed for torch-applied reinforced bituminous membranes.

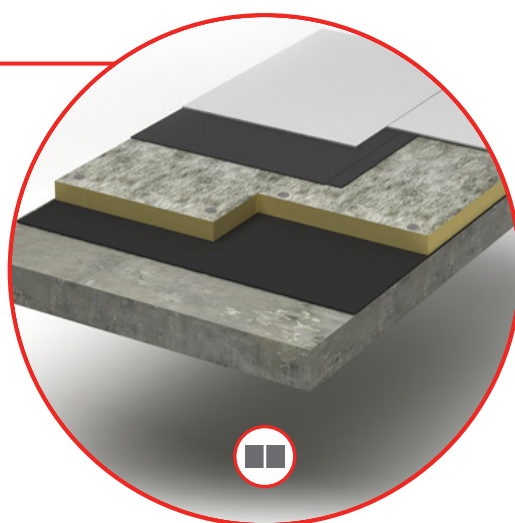
The PIR foam core is encased with a polypropylene-covered bitumen sand free glass membrane.

Details

- Thermal conductivity: thermal conduction coefficient: (EN 13165)
λD: 0.027W/(m.K) until 120mm and 0.026W/(m.K) from 120mm.
- Compressive strength at 10% deformation: ≥ 150 kPa

Thermal Resistance Rd-value (m². K/W)

| IKO enertherm BGF (mm) | 81 | 100 | 120 | 140 |
|------------------------|------|------|------|------|
| 1,200 x 1,000 mm | 3.00 | 3.70 | 4.60 | 5.35 |



IKO enertherm MG

IKO enertherm MG is used for the insulation of flat roofs in combination with plastic roof covering, also possible in combination with bituminous membranes.

Designed for adhered reinforced bituminous membranes.

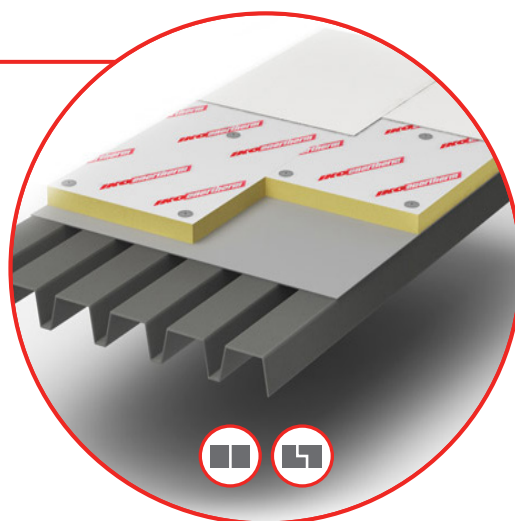
Both sides are clad with a perforated coated glass membrane.

Details

- Thermal conductivity: thermal conduction coefficient: (EN 13165)
λD: 0.027W/(m.K) until 120mm and 0.026W/(m.K) from 120mm.
- Compressive strength at 10% deformation: ≥ 150 kPa

Thermal Resistance Rd-value (m². K/W)

| IKO enertherm MG (mm) | 30 | 40 | 50 | 60 | 70 | 81 | 90 | 100 | 120 | 140 |
|-----------------------|------|------|------|------|------|------|------|------|------|------|
| 1,200 x 600 mm | 1.10 | 1.45 | - | 2.20 | - | 3.00 | - | 3.70 | - | - |
| 1,200 x 1,000 mm | 1.10 | 1.45 | 1.85 | 2.20 | 2.55 | 3.00 | 3.30 | 3.70 | 4.60 | 5.35 |
| 2,400 x 1,200 mm | - | 1.45 | 1.85 | - | 2.55 | 3.00 | - | 3.70 | 4.60 | - |



Additional Information



| Certificates & Accreditations | | | |
|-------------------------------|--|--|--|
| | ALU | BGF | MG |
| Fire Performance | Fire class according to EN 13501-1: Class E Fire class 'end use' according to 13501-1: B-S,d0 (steel deck) | Fire class according to EN 13501-1: Class F | Fire class according to EN 13501-1: Class E |
| FM | FM Approved | FM Approved | FM Approved |
| BBA | Agrément Certificate 15/5283 | Agrément Certificate 15/5283 | Agrément Certificate 15/5283 |
| CE Marking | In accordance with harmonised European Standards BS EN 13165: 2012 | In accordance with harmonised European Standards BS EN 13165: 2012 | In accordance with harmonised European Standards BS EN 13165: 2012 |
| Site Certification | ISO 14001 | | ISO 14001 |



IKO enertherm XPS

IKO enertherm XPS is a rigid extruded polystyrene (XPS) board; lightweight and lap jointed with high compressive strength. Designed for the thermal insulation of a wide variety of flat roofs including: inverted roof below ballast or paving slabs or in a green/garden roof configuration.

IKO enertherm XPS has a Global Warming Potential (GWP)* of less than 5 and achieves a BRE Certified Green Guide Rating of A.

System Benefits

- 15mm lap joint
- Excellent thermal performance
- High compressive strength
- Highly resistant to water absorption
- Able to resist repeated freeze/thaw cycles
- Lightweight and easy to install
- Tough and durable
- Dimensionally stable

Details

- Declared thermal conductivity: 0.033W/mk
- Comprehensive strength: 300kPa

Thermal Resistance Rd-value (m². K/W)

| IKO enertherm XPS (mm) | 70 | 130 | 160 | 180 | 200 | 220 |
|------------------------|------|------|------|------|------|------|
| 1,250 X 600mm | 2.10 | 3.90 | 4.80 | 5.45 | 6.05 | 6.65 |

* The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO₂). The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period.



Additional Information



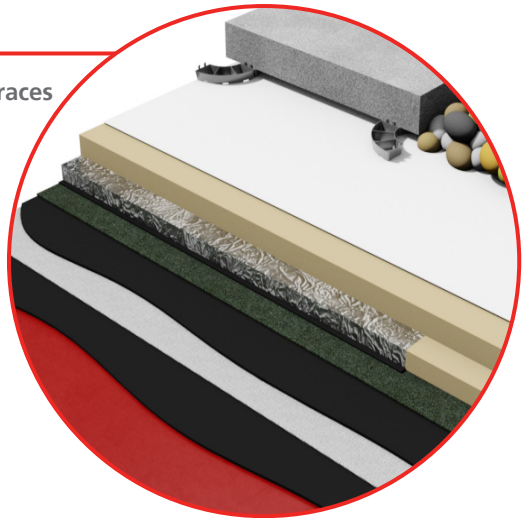
| Certificates & Accreditations | |
|-------------------------------|------------------------------|
| BBA | Agrément Certificate 14/5149 |
| CE Marking | Accepted |
| Site Certification | ISO 9001, ISO 14001 |



IKO enertherm VIP

IKO enertherm VIP is an inverted insulation for balconies and terraces providing optimum insulating performance. Designed for where there is a requirement for both low U-values and the thinnest possible construction build-up. Used as part of a scheme system and must only be used in conjunction with IKO enertherm XPS.

IKO enertherm VIP is a rigid vacuum insulation panel with microporous core which is evacuated, encased and sealed in a thin, gas-tight envelope, providing outstanding thermal properties, and the thinnest possible solution to insulation problems. The insulated panel comes with a pre-bonded protective layer underneath, offering superior product protection.



System Benefits

- Rigid vacuum insulation panel for optimum performance (thermal conductivity 0.008 W/m·K)
- Space saver insulation panel
- Superior product protection
- Save on labour. The board comes ready to be installed, with the protection layer pre-bonded underneath.
- Over 90% recyclable (by weight)
- Resistant to the passage of water vapour
- Ideal for new build and refurbishment
- Non-deleterious material
- Bespoke scheme layout drawing for every project

Details

- Thermal conductivity: 0.008 W/m·K
- Compressive strength: 150 kPa

Thermal Resistance Rd-value (m². K/W)

| IKO enertherm VIP (mm) | 20 | 25 | 30 | 40 | 50 |
|--|------|------|------|------|------|
| Length: 300 - 1200mm Width: 300 - 600mm | 2.50 | 3.12 | 3.75 | 5.00 | 6.25 |



IKO enertherm WCL

IKO enertherm (Water Control Layer) WCL is a high performance, thermally bonded tri-laminate of polypropylene; spun bonded (outer layers) and microporous (inner layer). Designed as a separating and water control layer in low moisture impact inverted and green roofs.

It is used in combination with IKO enertherm XPS as part of the IKO enertherm WCL System for inverted and green roofs.

Water resistant properties result in reducing the flow of water through the roof construction. This means that the impact on thermal performance by rainwater cooling is largely negated.

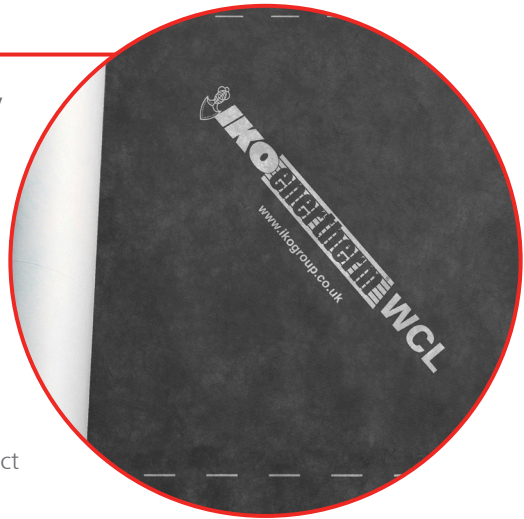
Inverted and green roofs incorporating IKO enertherm WCL are lighter as less ballast is required. This is due to a vastly reduced floatation impact as more drainage occurs above the insulation than below it.

System Benefits

- Improves the thermal performance of inverted and green roofs
- Waterproof and water vapour permeable
- Enables thinner insulation and less ballast to be used

Product Details

| Length | Width | Area per Roll |
|--------|-------|-------------------|
| 100m | 1.5m | 150m ² |





IKO enertherm Insulated Hard Edge

IKO enertherm Insulated Hard Edge is a stop batten that combines the properties of an incompressible perimeter edge or gutter termination to prevent cold bridging. IKO enertherm Insulated Hard Edge can be used with felt, mastic asphalt, single ply and liquid waterproofing.

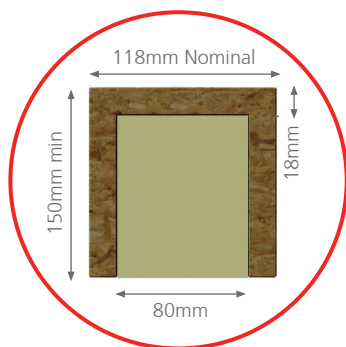
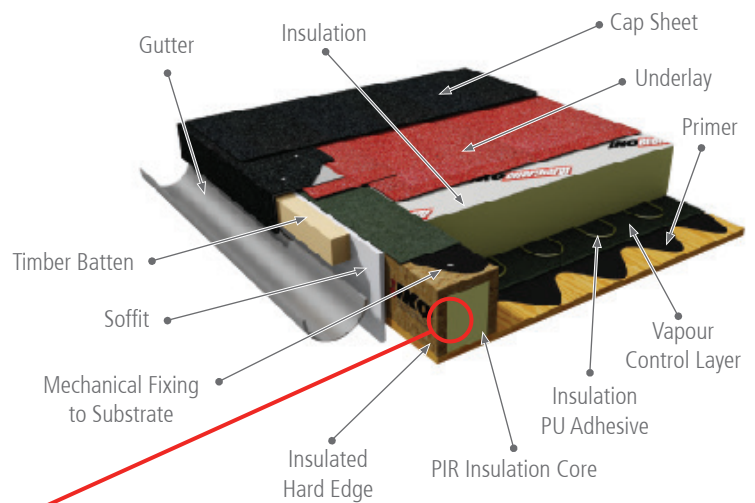
IKO enertherm Insulated Hard Edge is factory engineered to precise tolerances, it features a high performance insulating core of rigid PIR foam and (Oriented strand board) OSB faces that allow for the mechanical attachment of drips and perimeter trims. It is lightweight, stable and available in a full range of thickness options to complement detailing with any insulation board.

Sections are lightweight, easy to fix and are available in 1,200mm lengths ordered on a project specific basis. They form part of an extensive range of components including angled kerbs and tapered battens that suit many applications.



Product Benefits

- Factory engineered to precise tolerances
- Available in different heights & thickness
- Easy to fix to a variety of roof decks
- Lightweight & dimensionally stable
- Bonded or mechanically fixed
- Prevents cold bridging
- Easy to handle and transport
- Suitable for fixing drips and trims
- Thermally efficient PIR foam core
- Made using recycled materials





IKO PLC

Appley Lane North
Appley Bridge
Wigan
Lancashire WN6 9AB
www.ikogroup.co.uk

Member of the IKO Group

Sales Support

t: 01257 256 865
f: 01257 251 855
sales.uk@iko.com

Technical Services

t: 01257 256 864
f: 01257 252 514
technical.uk@iko.com

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