

# IKO enertherm XPS & enertherm WCL

## Technical Data Sheet – Section 13.00

### PRODUCT INFORMATION

IKO enertherm XPS is a rigid but lightweight extruded polystyrene (XPS) insulation board with high compressive strength that is used in conjunction with IKO enertherm WCL as a water flow reducing layer, for inverted roof system applications.

### USE

The IKO enertherm XPS and enertherm WCL build up is suitable for use on new and existing domestic and non-domestic buildings. The system is fully supported over inverted flat or zero pitch untrafficked roofs, balconies and terraced roofs (subject to pedestrian access only), with gravel or paving ballast and a suitably designed timber, concrete, or metal structural deck.

All work must be undertaken in accordance with the requirements of the specific information provided with the issued IKO Specification document, or guidance documents where applicable.

### INSULATION

#### OPTIONS

Each IKO enertherm XPS Insulation board measures 1250 x 600mm, with thickness options as below;

| Thickness | Product Code |
|-----------|--------------|
| 50mm      | 30400050     |
| 70mm      | 30400070     |
| 90mm      | 30400090     |
| 100mm     | 30400100     |
| 130mm     | 30400130     |
| 160mm     | 30400160     |
| 165mm     | 30400165     |
| 180mm     | 30400180     |
| 190mm     | 30400190     |

| Thickness | Product Code |
|-----------|--------------|
| 200mm     | 30400200     |
| 205mm     | 30400205     |
| 210mm     | 30400210     |
| 215mm     | 30400215     |
| 220mm     | 30400220     |
| 230mm     | 30400230     |
| 235mm     | 30400235     |
| 245mm     | 30400245     |
| 250mm     | 30400250     |



## PERFORMANCE

IKO enertherm XPS is supplied as a lap jointed board with a 15mm overlap in accordance with ETAG 031. The design thermal conductivity including moisture correction factor of the boards is 0.032W/mK for thicknesses  $\geq 50$ mm. For thicknesses under 50mm, 0.033W/mK.

The declared thermal conductivity of IKO enertherm XPS is 0.031W/mK to BS EN 12939.

|                           |                                              |
|---------------------------|----------------------------------------------|
| Water vapour resistivity: | 705 MNs/g.m in accordance with BS EN 12086   |
| Moisture absorption:      | 0.9% by volume in accordance with EN 12087   |
| Density:                  | 32kg/m <sup>3</sup>                          |
| Reaction to fire:         | Euroclass F in accordance with BS EN 13501-1 |
| Compressive strength:     | $\geq 300$ kPa in accordance with BS EN 826  |
| Colour:                   | Orange                                       |

|                        |                    |             |
|------------------------|--------------------|-------------|
| Weight:                | 95g/m <sup>2</sup> |             |
| Tensile strength (MD): | 185N/5cm           | (EN12311-1) |
| Tensile strength (CD): | 130N/5cm           | (EN12311-1) |
| Nail tear resistance   |                    |             |

## INSTALLATION

Boards should be laid in a brick bond pattern, ensuring all joints between the boards are tight and that no gaps exist where they meet penetrations, edge details and other services which perforate the roof deck. The boards can be cut using a fine-tooth saw, or a hot wire cutter.

As this product is utilised within an Approved Contractor network and guided by an IKO Specification document, where omission or differing information exists, the IKO Specification document will take precedence.

## HANDLING & STORAGE

IKO enertherm XPS is supplied in four-sided packaging designed to be easily recognised and is labelled with identifying product and manufacturing data. Ensure the product is not stored close to open flames or other ignition sources and avoid volatile organic compounds and chemicals such as solvents. IKO enertherm XPS should not be left exposed to prolonged sunlight as this will result in surface degradation. When outside storage for extended periods is required cover the products with opaque/light coloured sheeting.

## IKO ENERTHERM WCL

IKO enertherm WCL is a high performance, thermally bonded tri-laminate of polypropylene; spunbonded (outer layers) and microporous (inner layer). It is used as a Water Flow Reducing Layer (WFRL) above IKO enertherm XPS insulation and below the roof ballast layer in inverted roof systems, including paving, gravel ballast green and bio-diverse roof landscaping and blue roof applications.

## COMPOSITION

|            |                       |
|------------|-----------------------|
| Length:    | 100m                  |
| Width:     | 1.5m                  |
| Form:      | Roll                  |
| Colour:    | Black with Grey print |
| Thickness: | 0.4mm                 |

## PERFORMANCE

| Property                                      | Test method   | Unit                | Data           |
|-----------------------------------------------|---------------|---------------------|----------------|
| Weight                                        | -             | g/m <sup>2</sup>    | 95             |
| Tensile strength in MD                        | EN 12311-1    | N/5cm               | 185            |
| Tensile strength in CD                        | EN 12311-1    | N/5cm               | 130            |
| Nail tear resistance 20cm folded MD/CD        | "EN 12310 0 1 |                     |                |
| Water resistance                              | EN 20811      | M of head water     | 1.5            |
| Water vapour transmission (23°C/85% humidity) | Lyssy         | g/m <sup>2</sup> .d | 1200           |
| UV stability under constant exposure          | prEN 1297     | -                   | Up to 4 months |



## IKO ENERTHERM WCL INSTALLATION

IKO enertherm WCL must be laid with 300mm laps, overlapping in the downward direction of the designed flat roof slope. At upstands and penetrations, the membrane must be turned up to the level of the surface of the ballast layer; at drainage outlets, the membrane must be turned down.

For inverted blue roof applications the IKO enertherm WCL must be sealed in the field area, at upstands, penetrations and flow restriction devices.

For further guidance please refer to Liquid Roofing and Waterproofing (LRWA) Guidance Note No.14 – Guidance for the Installation of Water Flow Reducing Layers in Inverted warm roofs.

## PRODUCT ACCREDITATIONS

The product carries a BBA Agrément Certificate 17/5467 and is UK Conformity Assessed.

Copies of the relevant certification may be downloaded from the IKO website <https://ikogroup.co.uk/resource-centre/>



## OTHER RELEVANT DOCUMENTATION

Where applicable, Material Safety Data Sheets (MSDS), Declaration of Performances (DoPs), and Third-Party Accreditations are available to view and download from the IKO website Resource Centre:

<https://ikogroup.co.uk/resource-centre/>

## PRODUCT SUPPORT

Should you have any queries in relation to this product please contact one of the relevant teams below:

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Technical</b> | <a href="mailto:technical.ab@iko.com">technical.ab@iko.com</a> <ul style="list-style-type: none"><li>- For Reinforced Bitumen Membranes, IKOpro and Flexia Liquid Applied Waterproofing, Pitched Roofing, IKO Hyload Structural Waterproofing</li></ul> <a href="mailto:technical.ma@iko.com">technical.ma@iko.com</a> <ul style="list-style-type: none"><li>- For Mastic Asphalt</li></ul> <a href="mailto:technical.cc@iko.com">technical.cc@iko.com</a> <ul style="list-style-type: none"><li>- For Single Ply and Permasec Hot Melt</li></ul> |
| <b>Sales</b>     | <a href="mailto:sales.uk@iko.com">sales.uk@iko.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Marketing</b> | <a href="mailto:getintouch.uk@iko.com">getintouch.uk@iko.com</a>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## COMPANY ACCREDITATIONS

IKO PLC, a roofing, waterproofing, and insulation company, holds various accreditations that demonstrate its commitment to quality, safety, and environmental responsibility. These include ISO certifications for quality management and occupational health and safety, British Board of Agrément (BBA) accreditations for specific products and systems, and Factory Mutual (FM) approval for certain roofing systems.

All our manufacturing plants have BS EN ISO 9001, BS EN ISO 14001, BS EN ISO 45001, BES 6001, and PAS 2080 accreditation, meaning we match the quality and sustainability requirements and use responsibly sourced raw materials in our production. We also re-use by-products from manufacture, wrap products in minimal packaging, and we employ a streamlined transportation network.



IKO is also a leading member of all relevant trade associations such as NFRC, BFRA, SPRA, LRWA, MAC, RSTA, BJA and LCRIG having technical experts within the technical and standards committees to help us get informed first-hand about recent updates on technical requirements for the design and installation of roofing, waterproofing, road and bridge maintenance industry products.



## **DISCLAIMER**

Whilst every precaution is taken to ensure that the information given in this literature is correct and up-to-date it is not intended to form part of any contract or give rise to any collateral liability, which is hereby specifically excluded.

IKO reserves the right to amend and/or withdraw this document without notice.

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