

IKO enertherm XPS

IKO enertherm XPS is a rigid extruded polystyrene (XPS).

Thickness (mm)	Thermal Conductivity (W/mK)	Thermal Resistance (m ² K/W)	Length (mm)	Width (mm)	Compressive Strength (kPa)
70	0.033	2.10	1,250	600	300
130	0.033	3.90	1,250	600	300
160	0.033	4.80	1,250	600	300
180	0.033	5.45	1,250	600	300
200	0.033	6.05	1,250	600	300
220	0.033	6.65	1,250	600	300



IKO enertherm XPS is supplied as a Lap Jointed Board with a 15mm overlap. In accordance with ETAG 031 the design thermal conductivity; $\lambda_D \geq 100\text{mm} - 0.034\text{W/mK}$, $< 100\text{mm} - 0.035\text{W/mK}$.

Introduction

IKO enertherm XPS is a rigid extruded polystyrene (XPS) board with a Global Warming Potential (GWP) of less than five and achieves a BRE Certified **Green Guide Rating of A**.

A lightweight, lap jointed board with high compressive strength and performance, thermally bonded tri-laminate of polypropylene; spunbonded (outer layers) and microporous (inner layer).

Thermal performance of an inverted roof is improved when used in conjunction with IKO enertherm WCL.

Used for the thermal insulation of a wide variety of flat roofs including an inverted roof below ballast or paving slabs or a green/garden roof.

Features & 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

Thermal Performance & Edge Finish

The declared thermal conductivity of IKO enertherm XPS is **0.033 W/mK**.

The design thermal conductivity in including moisture correction factor of the boards is;

> 100mm thickness = **0.034W/mK**

< 100mm thickness = **0.035W/mK**.



IKO enertherm XPS: 15mm rebated edge profile, 4 sides.

Standards

Manufactured in accordance with BS EN 13164, BS EN ISO 50001 Energy Management Systems, OHSAS 18001 Occupational Health and Safety Management Systems, ISO 14001 Environmental Management Systems, and ISO 9001 Quality Management Systems, as certified by Bureau Veritas.

Environmental

The range of products has been independently assessed under the BRE's Green Guide to Specification and achieves a Certified Green Guide Rating of A. The product represents no known threat to the environment and has zero Ozone Depletion Potential (ODP) and a Global Warming Potential (GWP) of less than five. It is non bio-degradable and 100% recyclable.

Specification

Compressive Strength: IKO enertherm XPS is highly resistant to compression and withstands both occasional and long term static loads. The high compressive strength and rigidity of the product allows a range of ballast material including gravel, soil and concrete slabs to be used as part of the construction. Load bearing construction elements should be designed to adequately support the combination of imposed and dead loads without creating excessive deflection.

Durability: Continuous service temperature limit is up to +70° C.

Water Vapour Resistance: 625MN/g.m when tested in accordance with BS EN 12086.

Moisture Absorption: 0.6% by volume when tested in accordance with EN 12087.

IKO enertherm XPS (mm)	U-values (W/m ² K)
130	0.25
160	0.20 - 0.24
180	0.18 - 0.19
200	0.16 - 0.17
220	0.15
230 (160+70)	0.14
250 (180+70)	0.13
270 200+70)	0.12
290 (220+70)	0.11
320 (2x160)	0.10

Calculation Method: BS EN ISO 6946 incorporating Design Lambda value
 150mm Reinforced Concrete Deck (2% reinforcement) 2.50 W/mK
 7.5mm Hot Melt Waterproofing Layer R-value 0.030 m²K/W
 IKO enertherm WCL f.x 0.001
 Rainfall - Met Office Statistics, UK Average 1981 – 2010 3.16 mm/day

Handling & Storage

IKO enertherm XPS is lightweight and easy to handle and install, 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. Do not expose 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.



Certified BRE
Green Guide Rating

A

This technical datasheet is applied to products sold by IKO PLC and valid until withdrawal or until modification. Since this datasheet may be subject to revision, it is the responsibility of designer/end-user to make sure of possessing the latest version of the datasheet (*see date of issuing). Most recent version of this datasheet can be also accessed under www.ikogroup.co.uk. Modification of the technical datasheet repeals the previously issued versions!

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