

Technical Data Sheet Ravatherm XPS X ULTRA 300 SL

Product Description / Use:

Ravatherm XPS X ULTRA 300 SL is a thermal insulation product designed for inverted flat roofs, offering the thinnest XPS insulation, due to its extremely low lambda values across the whole range of board thicknesses.

This flame retarded, high-performance, multi-purpose extruded polystyrene is for the thermal insulation and frost protection of inverted flat roofs, green and blue roofs.

It is manufactured by an extrusion process which results in homogeneous, closed-cell material structure and smooth surface skin (extrusion skin) which has many favourable material characteristics.

Benefits:

- Declared thermal conductivity of 0.027 W/mK in thicknesses of 70mm, 80mm, 105mm, 130mm, 145mm, 175mm, 205mm.
- Global Warming Potential (GWP) of <1.
- Low thermal conductivity minimises the board thickness needed to achieve a specific U-value, thus allowing the designer greater flexibility.
- Closed cell structure for high compressive strength in load-bearing applications.
- Low water absorption - natural resistance to rain, snow, frost and water vapour.
- Exceptionally stable, retaining initial insulation performance and physical integrity in exposed conditions over the very long term.
- User-friendliness - Ravatherm XPS X ULTRA 300 SL is easily worked with normal hand tools.
- Hygiene - Ravatherm XPS X ULTRA 300 SL boards have low susceptibility to rot, minimising mould or fungal growth. They are clean, odourless and free from irritating dust.
- Service life - properly installed Ravatherm XPS X ULTRA 300 SL boards have a service life comparable with that of the building or structure.
- Ravatherm XPS X ULTRA 300 SL boards are BBA certified.



Water Filtration:

The product can be used in conjunction with the Ravatherm XPS X MK filter/water-flow-reducing layer between the insulation and the ballast layer, forming the Ravatherm XPS X MK system. Adding Ravatherm XPS X MK waterflow reducing layer over the insulation before placing ballast or paving on spacers, means most of the rainwater flows above the insulation, minimising rain water cooling of the water proofing layer.

System Fire Testing:

Test Standard: CEN/TS 1187: 2012

Classification Standard: BS EN 13501-5: 2016 *

* Determination of external fire performance is a system test which will be influenced by the components within the roofing system.

Inverted roofs ballasted with incombustible material, such as aggregate or paving slabs, offer adequate resistance to the external fire rating of $B_{ROOF(t4)}$ which make the roof unrestricted with respect to proximity to a relevant boundary under Approved Document B of the Building Regulations.

Ravatherm XPS X ULTRA 300 SL is rated Euroclass E under BS EN 13501-1 Reaction to Fire test.



Technical Data Sheet Ravatherm XPS X ULTRA 300 SL

Thermal Conductivity:

The thermal conductivity (or lambda value) shows how well a material can conduct heat.

The lower the thermal conductivity, the better the insulator.

Ravatherm XPS X ULTRA 300 SL has a thermal conductivity (declared) of:

- 0.027 W/mK

Board Size:

- 1250 x 600 mm

Thicknesses:

- 70mm - 205mm

For specific product availability always check with MOY.

Compressive strength:

Compressive strength is a material's ability to maintain its structural integrity when compressed. The higher the compressive strength the better the material is at maintaining its structural integrity.

The compressive strength of Ravatherm XPS X ULTRA 300 SL typically exceeds 300 kPa at 10% deformation.

Technical Specification:

Detailed product characteristics for this product are given in Declaration of Performance (DoP).

Sustainability Information:

Ravatherm XPS X ULTRA 300 SL has a Global Warming Potential (GWP) of <1. It has attained a coveted Green Guide Rating A+ by BREEAM and continues to enable the construction of energy efficient buildings.

Installation and handling:

Loose lay Ravatherm XPS X ULTRA insulation boards, tightly butted and in a brick bond pattern, with shiplap edges tightly pushed together. Cut cleanly to fit closely around projections, upstands, rainwater outlets etc. Ensure boards are in good condition, with no springing, flexing or rocking. Secure boards against wind uplift as soon as practicable and lay the Ravatherm XPS X MK water flow reducing layer (WFRL) strictly as per the appropriate product guidance.

For full information on installation and handling please refer to specific product guidance and the project specification.

Storage:

Ideally, boards should be stored inside a building. If, however, outside storage cannot be avoided, then the boards should be stacked clear of the ground and covered with an opaque polythene sheet or weatherproof tarpaulin.

Use scaffold boards when barrowing materials over Ravatherm XPS X ULTRA 300 SL boards.

During shipment, storage, installation and use Ravatherm XPS X ULTRA should not be exposed to flames or other ignition sources.



Technical Data Sheet Ravatherm XPS X ULTRA 300 SL

Disposal:

Information for this product is given in the Safety Data Sheet.

MOY Materials Ltd has taken care to ensure that the information provided in the literature is correct and up to date. However, it is not intended to form any part of a contract or provide a guarantee. Purchasers/intending purchasers should contact MOY Technical to check whether there have been any changes to the information since publication of the literature. Please ensure you have read the hazard labels and material safety data sheet before using this product.