

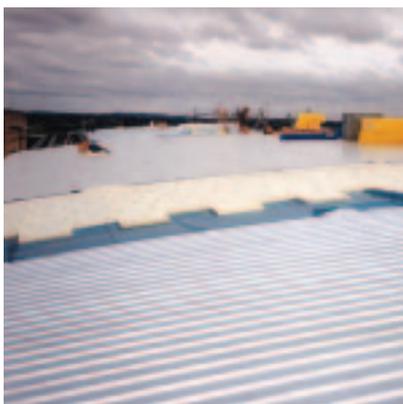
Flat roof insulation

URSA XPS HR

	URSA XPS HR-E ROOFBOARD SP	URSA XPS HR-L ROOFBOARD 350	
Compressive strength (BS EN 826)	≥300	≥350	kPa
Thermal Conductivity (BS EN 12667)	0.029	0.029	W/mK
Water vapour resistivity (BS EN 12086)	350 - 950	350 - 950	MNs/gm
Water absorption (BS EN 12087)	≤0.7	≤0.7	%
Composition and surface	Zero capillarity closed cell extruded polystyrene, surface skin		
Coefficient of linear thermal expansion (BS 4370-1)	0.07	0.07	mm/mK
Fire Classification (BS EN 12501)	E	E	
Thicknesses available	80, 100, 120	50, 60, 75, 80, 100, 120, 130, 140	mm
Sheet size	2500 x 600	1250 x 600	mm
Edge profile	Tongue and Groove	Half-lapped	

URSA XPS N

	URSA XPS N-III-L ROOFBOARD 300	URSA XPS N-V-L ROOFBOARD 500	
Compressive strength (BS EN 826)	≥300	≥500	kPa
Thermal Conductivity (BS EN 12667)	0.034 - 0.036	0.034 - 0.036	W/mK
Water vapour resistivity (BS EN 12086)	350 - 950	350 - 950	MNs/gm
Water absorption (BS EN 12087)	≤0.7	≤0.7	%
Composition and surface	Zero capillarity closed cell extruded polystyrene, surface skin		
Coefficient of linear thermal expansion (BS 4370-1)	0.07	0.07	mm/mK
Fire Classification (BS EN 12501)	E	E	
Thicknesses available	50, 60, 75, 80, 100, 120	50, 60, 80, 100, 120	mm
Sheet size	1250 x 600	1250 x 600	mm
Edge profile	Half-lapped	Half-lapped	



Delivery, handling and storage

URSA XPS insulation boards are delivered shrink-wrapped. URSA XPS is light, rigid and clean and pleasant to handle and install. It is easily cut to size or trimmed using a knife or saw. URSA XPS should be stored flat in a ventilated area and protected from accidental damage, contact with volatile solvents, flames and extended exposure to UV and sunlight.

Availability and support

URSA XPS is readily available throughout the UK from leading stockists. Details, with comprehensive and experienced technical and sales support are freely available to specifiers and contractors from URSA's UK office.

All illustrations and statements regarding the use of URSA XPS products featured in this and other publications are based upon the knowledge and experience gained by URSA in manufacturing insulation materials. They are made in good faith without any guarantee or warranty of accuracy. URSA, as a supplier, exercises no control over the installation of its products. In particular no responsibility is accepted for the system in which POLIGLAS products are used or the methods of application by which they are installed. URSA also reserves the right to withdraw any product or size without prior warning.

URSA UK Limited
 Crest House, 102-104 Church Road,
 Teddington, Middlesex, TW11 8PY
 Tel. 020 8977 9697
 Facsimile 020 8977 9456
 Web: www.ursa-online.com
 Email: ursauk@uralita.com

Flat roof insulation

URSA is the insulation division of the URALITA Group. It is a major insulation materials company with an outstanding range of proven products, each resulting from an extensive programme of research and development and more than 50

years of manufacturing expertise.

URSA XPS is extruded polystyrene available as products designed for construction applications including Flooring, Cavity Walls, Cavity Closing, Roofing and Linings.

Description

URSA XPS ROOFBOARD rigid extruded polystyrene board provides excellent performance in cavity wall insulation applications due to the following key advantages:

Exceptional Strength

- Proven long term performance
- High resistance to settlement and compaction
- Dimensional and edge profile stability

Excellent moisture performance (Closed Cell Structure)

- Very high resistance to moisture penetration
- Low vapour permeability
- High resistance to freeze thaw cycles
- Proved long term retention of these properties

Superior Thermal Resistance

- Low thermal conductivity
- Thinner boards required than some traditional materials

Health and Safety

- CFC and HCFC-free formulation
- Zero ozone depletion potential (ODP)
- Non-irritant, light and easy to handle
- Clean, easy cutting, robust and inherent weather resistant on site

Standards

- The use of URSA XPS for flat roof applications has been approved by the British Board of Agrément (Certificate No 02/3878).
- All URSA XPS products carry the CE mark and comply with the relevant European standards.
- URSA XPS is manufactured to assessed BS ISO 9002 Quality Assurance procedures.

Product range

URSA XPS ROOFBOARD is available in different compressive strengths and a range of thicknesses. Boards have half-lapped or tongued and grooved edges and are 1250x600mm or 2500x600mm.

URSA XPS HR-E ROOFBOARD SP

Single Ply Warm Roof applications

- Thicknesses: 80-120mm
- Thermal conductivity: 0.029 W/mK
- Compressive stress: $\geq 300\text{kPa}$
- Water absorption: $\leq 0.7\%$

URSA XPS N-III-L ROOFBOARD 300

Inverted ballasted flat roofs

Green roofs

- Thicknesses: 50-140mm
- Thermal conductivity: 0.032-0.036 W/mK
- Compressive stress: $\geq 300\text{kPa}$
- Water absorption: $\leq 0.7\%$

URSA XPS HR-L ROOFBOARD 350

Inverted ballasted flat roofs

Green roofs

- Thicknesses: 30-140mm
- Thermal conductivity: 0.029W/mK
- Compressive stress: $\geq 350\text{kPa}$
- Water absorption: $\leq 0.7\%$

URSA XPS N-V-L ROOFBOARD 500

Inverted ballasted flat roofs

(very high loading situations)

Car park decks

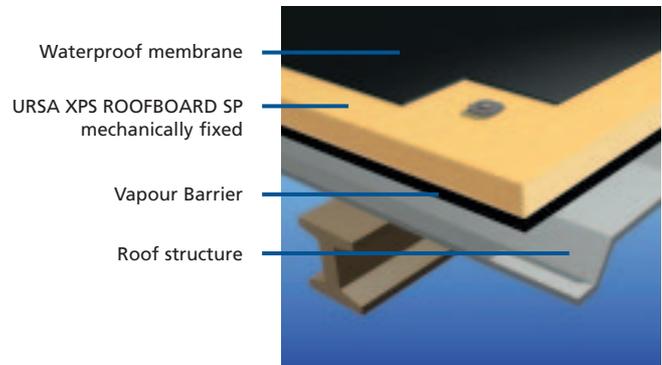
- Thicknesses: 40-120mm
- Thermal conductivity: 0.034-0.036 W/mK
- Compressive stress: $\geq 500\text{kPa}$
- Water absorption: $\leq 0.7\%$

All properties according to BS EN 13164

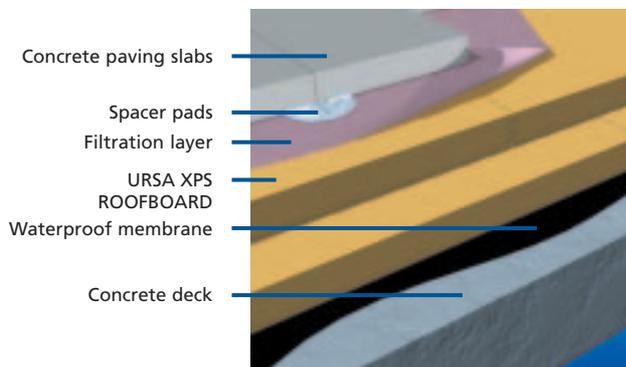


Flat roof insulation

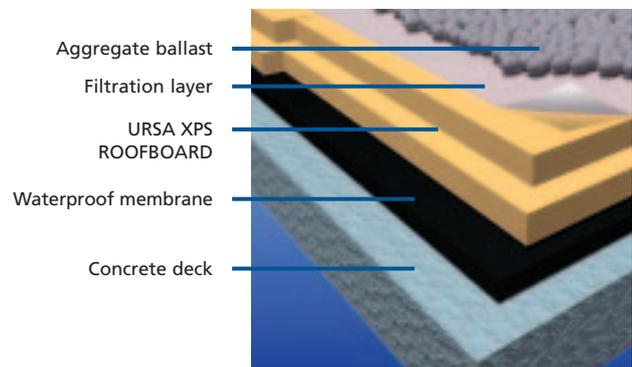
Single ply warm roofs



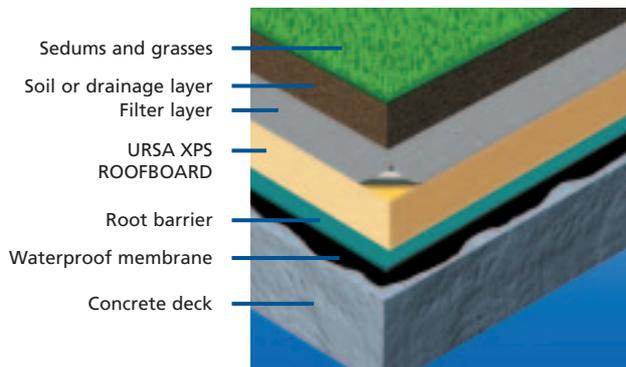
Paved ballasted inverted roofs



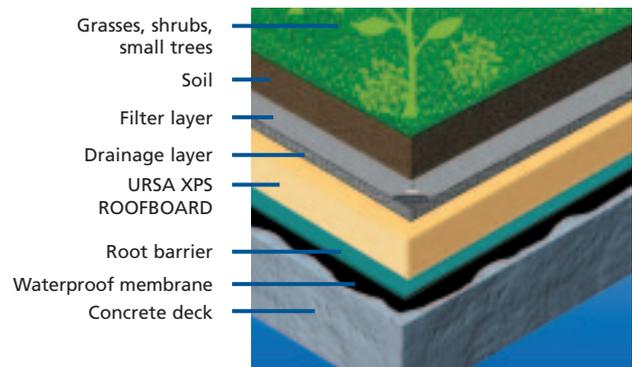
Aggregate ballasted inverted roofs



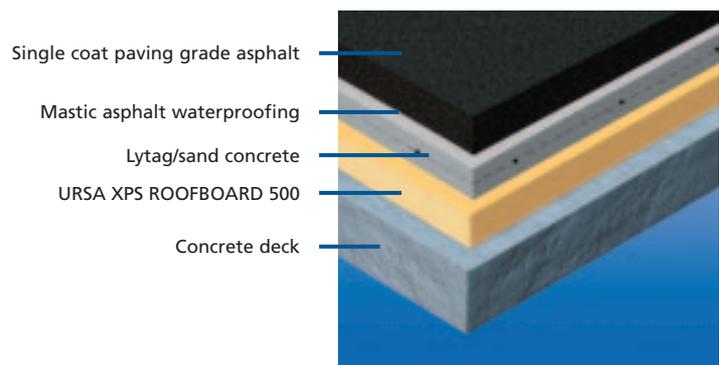
Extensive green roofs



Intensive green roofs



Car park decks



Flat roof insulation

Flat roof insulation

Because of their particular properties URSA XPS products are especially suited to warm and inverted roof applications. URSA XPS does not absorb water and is highly resistant to temperature and weather effects.

URSA XPS is compatible with all conventional waterproof membranes (e.g. Polyethylene, PVC, bitumen felts, asphalt etc.). Membranes containing solvent should be allowed to breathe before URSA XPS boards are laid. Some PVC membranes (according to manufacturers' recommendations) may need to be protected by a fleece layer.

Inverted (upside down) roofs

Inverted roof constructions have the benefit of placing the insulation above the waterproofing membrane, thus protecting it from physical damage, frost and the effects of extreme temperature variations.

The position of the waterproof membrane below the insulation creates a very effective vapour control layer and the roof structure is maintained at a temperature close to that of the inside of the building thus reducing the risk from interstitial condensation.

Installation

Inverted roofs

Prior to installing the insulation it is essential to ensure that the waterproofing system has been installed correctly and that the roof is waterproof and clean. Existing roofs should be swept clean of any loose chippings and the skirting of the waterproofing must be at least 150mm above the finished roof level at upstands, parapets, around rooflights etc.. Cover flashings are applied to any exposed ROOFBOARD edges to protect them from the effects of UV degradation. This detail is also used at insulated upstands. Alternatively URSA XPS Clad can be installed with various foam thicknesses (refer to URSA XPS LINING-BOARD product literature).

URSA XPS ROOFBOARD is loose-laid over a separating layer (if required) in a half-bond pattern tightly butted at the joints. There must be no gap where the boards meet upstands. Boards should be cut with a sharp knife or a fine tooth saw.

If a filter layer is required, it should be laid with 150mm laps at right angles to the falls on the roof. Aggregate ballast or paving slabs should then be laid on top.

Aggregate ballast should be washed rounded flint gravel and should be 16 to 40mm nominal size. The depth of the aggregate should be equal to the thickness of the insulation up to a maximum of 75mm thick boards. For constructions using thicker insulation, please consult the table below for suggested depth of aggregate. When a filter layer is used a 50mm depth of aggregate will be sufficient to counter wind uplift and flotation of the insulation.

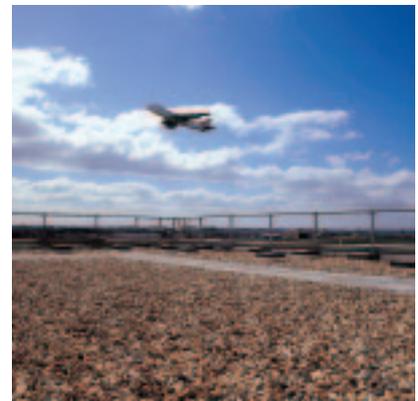
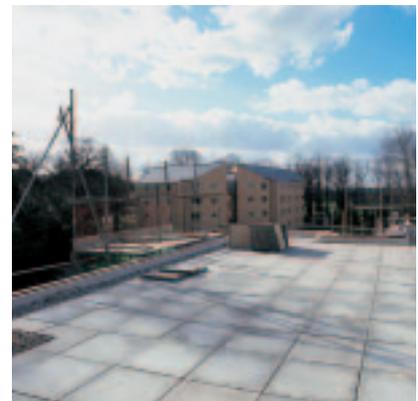
Thickness of ROOFBOARD	Nominal depth of aggregate
80mm	75mm
90mm	75mm
100mm	80mm
120mm	90mm
140mm	100mm

Paving slabs should be a minimum of 40mm thick when the insulation thickness is 50mm. For every 10mm increase in insulation thickness, the slabs should be increased by 5mm. An alternative to increasing the paving slab thickness above 50mm is to overlay the boards with a geotextile layer. The slabs should be raised off the insulation on paving support pads in order to maintain drainage below the slabs.

Rainwater will filter through the loading layer and URSA XPS boards down to the membrane below and thence to gutters and outlets. Outlets will need to collect rainwater at both the membrane and upper layers and extended gratings are normally installed to allow this.

Car Park Decks

URSA XPS ROOFBOARD 500 boards should be loose-laid over a precast concrete deck. A minimum of 75mm reinforced Lytag/sand concrete should be laid on top of URSA XPS ROOFBOARD 500. The waterproofing should then be applied over a glass fibre tissue underlay. The skirting of the waterproofing must be at least 150mm above the finished roof level at upstands. A paving grade asphalt layer of 30mm should then be laid above the waterproofing.



Green Roofs

URSA XPS ROOFBOARD should be loose-laid on a waterproofing layer over a screed to falls on a precast concrete deck. The filter layer and top soil are then installed in accordance with the roof garden specification (consult Ursa).

Single Ply Warm Roofs

URSA XPS SP boards should be laid in a half-bond pattern with the long edges at right angles to the crowns of the metal deck ensuring the boards are tightly butted at the joints. Each board should be fastened to the deck with three fixings evenly distributed and installed in accordance with the fixing manufacturers' instructions.

The boards can be cut with a sharp knife or fine tooth saw to fit against upstands and rooflights etc.. A suitable single-ply membrane should then be laid over the URSA XPS SP and secured.

Some PVC membranes according to manufacturers' instructions may require a fleece separating layer. Alternatively ROOFBOARD SP is available foil-faced.