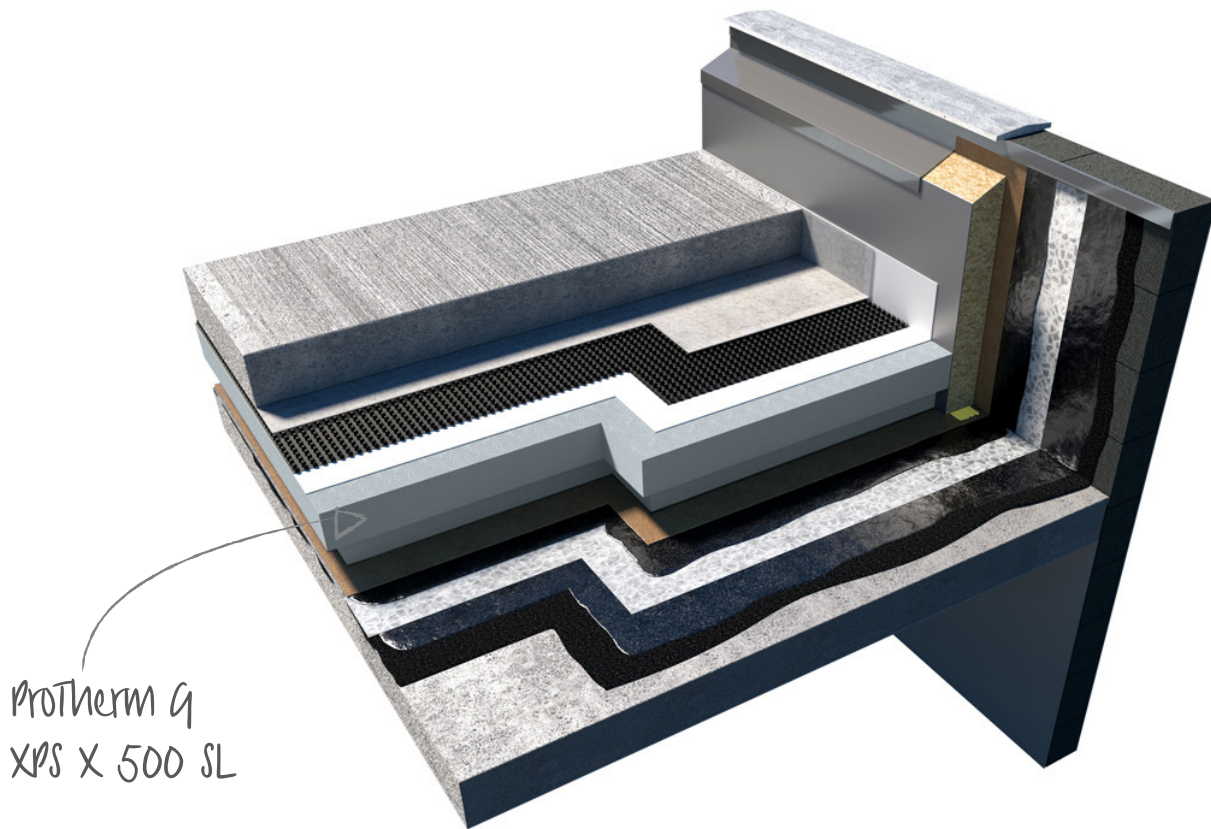


ProTherm G XPS X 500 SL

Product Data Sheet



ProTherm G XPS X 500 SL

Inverted Roof Insulation

General Information

ProTherm G XPS X 500 SL inverted roof insulation is a rigid, closed cell type Extruded polystyrene board with integral high density skin. ProTherm G XPS X 500 SL inverted roof insulation has a Zero Ozone Depletion Potential (ODP), a Global Warming Potential (GWP) of less than 5 and an A rating in accordance with the Green Guide to Specification. For use with Inverted Roof Waterproofing such as PermaQuik PQ 6100, EshaFlex, EshaUniversal, ParaFlex FD and ReadySeal.

Suitable applications

ProTherm G XPS X 500 SL is suitable for use in roofs, roof terraces, enclosed balconies over heated space and insulated walkways in an inverted roof construction. When used in the inverted roof constructions listed in the Fire Performance section below roof constructions incorporating ProTherm G XPS X 500 SL achieve Broof(t4) Classification to BS EN 13501-5 as required by Approved Document B 2019 edition, Section B4, Limitations on roof coverings.

ProTherm G XPS X 500 SL is not suitable for use in inverted roof applications on specified attachments such as projecting open balconies, projecting enclosed balconies, recessed open balconies or recessed enclosed balconies.

ProTherm G XPS X 500 SL is not suitable for use in warm roof applications (where the waterproofing is installed above the insulation board).

Certificates

ISO 9001@2008 Quality Management System, ISO 14001 :200 Environmental Management System, EPD as per ISO 14025 and EN 15804.

Fire Performance

As a roofing system for roofs, roof terraces, enclosed balconies over heated space and insulated walkways

In accordance with Annex of Commission Decision 2000/553/EC, when used in an inverted roof specification including an inorganic covering of either loose laid gravel with a thickness of at least 50mm or a mass $\geq 80 \text{ kg/m}^2$, sand/cement screed to a thickness of at least 30mm, or cast stone or mineral slabs of at least 40mm thickness a roof system incorporating ProTherm G XPS X 500 SL can be considered to be unrestricted under the national Requirements (Classification Broof(t4) to BS EN 13501-5:2016).

Resistance to foot traffic

The product, in conjunction with the specified ballast layer, can accept limited foot traffic associated with maintenance operations.

Durability

The product will have a life of at least 25 years under normal circumstances.

ProTherm G XPS X 500 SL

Inverted Roof Insulation

PRODUCT DESCRIPTION

Appearance top side	Grey Skin
Core	Grey colour, HFC free, Extruded polystyrene foam XPS (EN13164). Products comply with BS EN 13164: 2008 Thermal insulation products for buildings - factory made products of extruded polystyrene (XPS) - specification.
Appearance bottom side	Grey Skin
Edge profile	Shiplap

Essential characteristics	Performance	Unit	EN Code EN 13164	Standard
Density (aim, foam only)	38	kg/m ³	-	BS EN 1602
Dimensions and tolerances		mm		
- Thickness	50, 75, 100	mm	T1	BS EN 822
- Width	600	mm	-	BS EN 822
- Length	1250	mm	-	BS EN 823
Thermal conductivity		W/mK		
Declared value (1) - 50-200mm	0.031	W/mK	λ_D	BS EN 12667
Design value (1) - 50-200mm	0.032	W/mK	λ_U	BS EN 12667
Reaction to fire	Class E	-	Euroclass	B EN 13501-1
Mechanical properties		kPa		
- Compressive stress or compressive strength at 10% deformation	500	kPa	CS(10\Y)	BS EN 826
- Compressive creep max. after (50 years) < 2% deformation under stress oc	180	kPa	CC(2/1.5/50)oc	BS EN 1606
Hygrometric properties		%		
- Long term water absorption by immersion (28 days)	< 0.7	%	WL(T)	BS EN 12087
- Long term water absorption by diffusion		%	WD(V)	BS EN 12088
- dN \geq 50 mm to < 80 mm	< 2	%	WD(V)	BS EN 12088
- dN \geq 80 mm	< 1	%	MU	BS EN 12086
- Water vapour diffusion resistance factor (μ), typical	150	-	FTCD	BS EN 12091
- Freeze/thaw, after 300 cycles	< 1	%	DS(70,90)	BS EN 1604
- Dimensional stability under specified temperature and humidity conditions	< 5	%	DLT(2)5	BS EN 1605
- Deformation under specified compressive load and temperature conditions	\leq 5	%		
Environmental properties				
- Ozone depletion potential	Zero	-	-	-
- Global warming potential	< 5	-	-	-
Other properties		mm/m·K		
- Linear thermal expansion coefficient	0.07	°C	-	-
- Maximum service temperature	-50/+75	-		
- Capillarity	0	-		

(1) Declared thermal conductivity λ_D according to EN 13164 (§ 4.2.1; Annex A; Annex C.2 and C.4.1)

EN designation code T1-CS(10\Y)500-CC(2/1,5/50)180-WL(T)0,7-WD(V)2-FT1-DS(TH)-DLT(2)5

ProTherm G XPS X 500 SL

Inverted Roof Insulation

Installation Instructions

- Apply ProTherm G XPS X 500 SL insulation boards parallel to roof perimeter long edges. Stagger end joints.
- Lay ProTherm G XPS X 500 SL insulation boards with edges in moderate contact without forcing.
- Cut ProTherm G XPS X 500 SL insulation to fit neatly to perimeter blocking and around penetrations through roof, when using a 2nd layer stagger joints of insulation from first layer.
- Unroll ProTherm XPS X MK Filter/Water Flow Reducing Layer over the ProTherm G XPS X 500 SL at right angles to the slope ensuring each sheet overlaps the next by 150mm (laps running down the slope). If finishing the roof with gravel ballast of a maximum depth of 50mm overlaps should be increased to 300mm. At upstands and penetrations ProTherm XPS X MK Filter/Water Flow Reducing Layer should be turned up to finish above the surface of the ballast layer.
- Apply no more ProTherm G XPS X 500 SL insulation than can be covered with aggregate ballast/concrete roof pavers/green roofing in the same day.
- Keep ProTherm G XPS X 500 SL insulation minimum 75mm from heat emitting devices, and minimum 50mm from sidewalls of chimneys and vents.

Delivery conditions

Delivery form

Shrunk wrapped on a pallet, quantity depending on board thickness.

Storage and transport

During shipment, storage, installation and use, this material should not be exposed to flame or other ignition sources. This material contains a halogenated flame retardant additive system to inhibit accidental ignition from small fire sources.

Product identification

Information on the pack;

Product name.

Dimensions.

Approvals.

Production date.

NBS Specification Clauses

Please view on NBS Source here:

<https://source.thenbs.com/product/protherm-g-xps-x-500-sl-insulation>

For a comprehensive NBS specification contact Radmat Building Products.

This information given in good faith and is based on the latest knowledge available to Radmat Building products Ltd. Whilst every effort has been made to ensure that the contents of the publication are current while going to press, customers are advised that products, techniques and codes of practice are under constant review and liable to change without notice.

For further information on Radmat products and services please call **01858 410372**, email techenquiries@radmat.com or visit our website www.radmat.com

31/07/24