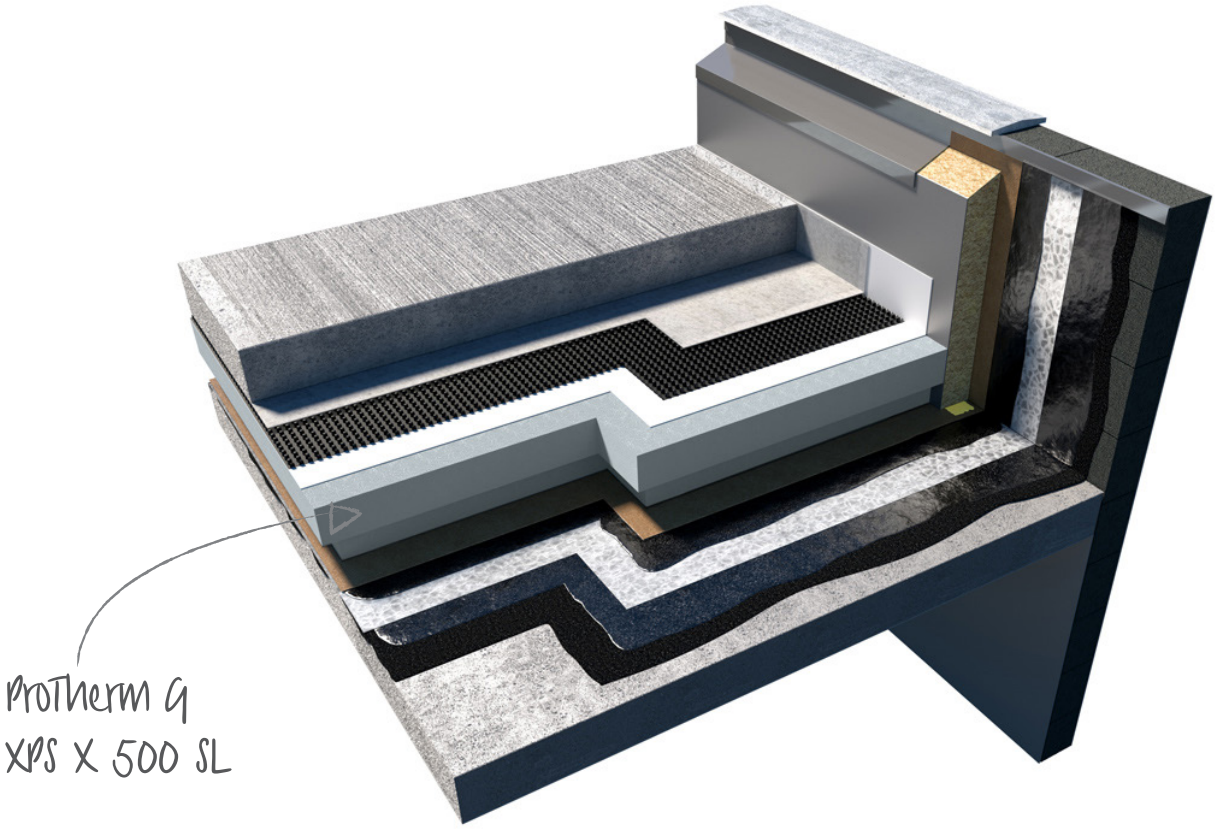
Radmat® building products

Specialists in Roofing and Waterproofing

# **ProTherm G** XPS X 500 SL

## Product Data Sheet




A rigid, closed cell type extruded polystyrene board with integral high density skin.

# **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.

For a comprehensive NBS J31 specification contact Radmat Building Products.

### 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.

### 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.

### 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 ≥ 80 kg/m², 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).

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## 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.

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# **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 |

| DECLARED PERFORMANCE | | | | |
|---|---|---|---|---|
| **Essential characteristics** | **Performance** | **Unit** | **Code** | **Standard** |
| **Ozone Depletion Potential** | Zero | - | - | - |
| **Global Warming Potential** | < 5 | - | - | - |
| **Density (aim, foam only)** | 38 | kg/m³ | - | BS EN 1602 |
| **Dimensions**<br>- Length<br>- Width<br>- Thickness | <br>1250<br>600<br>50, 75, 100 | <br>mm<br>mm<br>mm | <br>-<br>-<br>- | <br>BS EN 822<br>BS EN 822<br>BS EN 823 |
| **Dimensional stability**<br>48 hrs at 70C/90%RH<br>168 hrs at 40kPa/70C | <br>< 2<br>< 5 | <br>%<br>% | <br>DS(TH)<br>DLT(2)5 | <br>BS EN 1604<br>BS EN 1605 |
| **Thermal conductivity ***<br>Thickness<br>< 60 mm<br>> 60 mm | <br><br>0.031<br>0.032 | <br><br>W/mK<br>W/mK | <br>$\lambda_D$ | <br><br>BS EN 12667<br>BS EN 12667 |
| **Mechanical properties**<br>- Compressive strength at 10% deformation (90 days)<br>- Design load 2% max. deflection (50 years) | <br>500<br>180 | <br>kN/m²<br>kN/m² | <br>-<br>- | <br>BS EN 826<br>BS EN 1606 |
| **Hygrometric properties**<br>- Long term water absorption by total immersion (28 days)<br>- Long term water absorption by diffusion<br>- Water vapour diffusion resistance factor (μ), typical<br>- Freeze/thaw, after 300 cycles | <br>< 0.7<br>< 3<br>80-200<br>< 1 | <br>vol %<br>vol %<br>vol %<br>vol % | <br>WL(T)i<br>WD(V)i<br>MUi<br>FTi | <br>BS EN 12087<br>BS EN 12088<br>BS EN 12086<br>BS EN 12091 |
| **Fire Classification - Reaction to fire** | E | - | Euroclass | BS EN 13164<br>BS EN 113501-1 |
| **Linear thermal expansion coefficient** | 0.07 | mm/m.K | - | - |
| **Service temperature** | -50 to +75 | °C | - | - |
| **Capillarity** | 0 | - | - | - |

* declared 90/90 value - BS EN 13164



For further information on Radmat products and services please call **01858 410372**, email **techenquiries@radmat.com** or visit our website **www.radmat.com** **AUG 21**

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