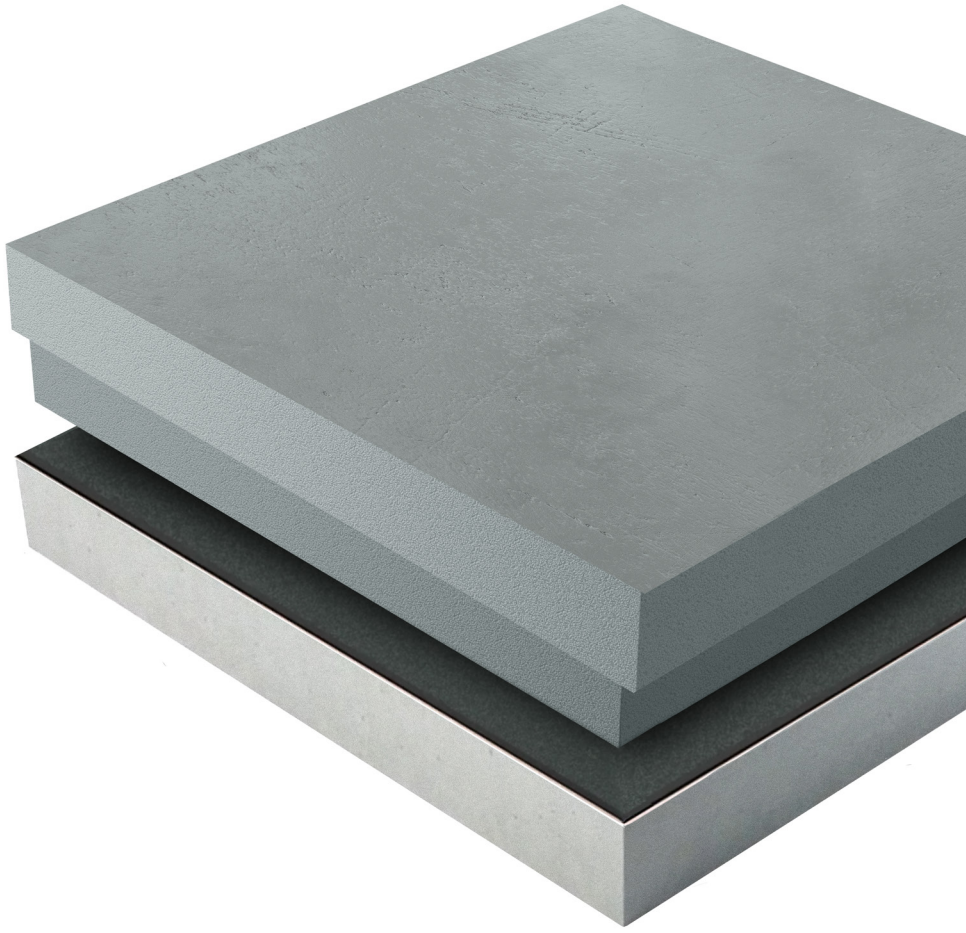
Radmat building products

Specialists in Roofing and Waterproofing

ProTherm G XENERGY Ultra

Product Data Sheet



Inverted Roof Insulation with a unique rigid, closed cell type extruded polystyrene board with integral high density skin.

ProTherm G XENERGY Ultra Inverted Roof Insulation

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General Information

ProTherm G XENERGY Ultra Inverted Roof Insulation is a unique rigid, closed cell type extruded polystyrene board with integral high density skin. ProTherm G XENERGY Ultra Inverted Roof Insulation utilises infra-red blocking particles to scatter and reflect heat radiation.

ProTherm G XENERGY Ultra Inverted Roof Insulation has a Zero Ozone Depletion Potential (ODP), a Global Warming Potential (GWP) of less than 5.

For use with Inverted Roof Waterproofing such as PermaQuik PQ6100, EshaFlex, EshaUniversal and ParaFlex.

Use with **ProTherm XENERGY MinK Water Flow Reducing Layer** prior to the installation of paving, ballast, a green roof or timber decking.

For a comprehensive NBS J31 specification contact Radmat Building Products.

Certificates

ISO 9001:2008 Quality Management System, ISO 14001:2004 Environmental Management System, EPD as per ISO 14025 and EN 15804.

Installation Instructions

Apply ProTherm G XENERGY Ultra Inverted Roof Insulation boards parallel to roof perimeter long edges. Stagger end joints.

Lay ProTherm G XENERGY Ultra Inverted Roof Insulation boards with edges in moderate contact without forcing.

Cut ProTherm G XENERGY Ultra Inverted Roof Insulation to fit neatly to perimeter blocking and around penetrations through roof, when using a 2nd layer stagger joints of insulation from first layer.

Apply no more ProTherm G XENERGY Ultra Inverted Roof Insulation than can be covered with aggregate ballast/concrete roof pavers/green roofing in the same day.

Keep ProTherm G XENERGY Ultra Inverted Roof Insulation minimum 75mm from heat emitting devices, and minimum 50mm from sidewalls of chimneys and vents.

Fire Performance

BS 476 Part 3 : 2004 - When ballasted with aggregate (minimum depth of 50 mm), or fully-supported cast stone or mineral slabs of at least 40 mm thickness, a roof construction incorporating ProTherm G XENERGY Ultra may be considered to be of designation EXT.F.AA (low vulnerability in Scotland) and as such is unrestricted by the National Building Regulations.

BS EN 13501-5:2016 'Euroclass A5' - When ballasted with aggregate (minimum depth of 50 mm), or fully-supported cast stone or mineral slabs of at least 40 mm thickness, a roof construction incorporating ProTherm G XENERGY Ultra may be considered to be of designation T4 and as such is unrestricted by the National Building Regulations.

BS EN 13501-1:2016 'Euroclass A1' - ProTherm G XENERGY Ultra Inverted Roof Insulation contains PolyFR, a REACH compliant flame retardant, that ensures Euroclass E performance.

Hexabromocyclododecane (HBCD) was phased out prior to the 21st August 2015.

For further information on Radmat products and services please call **01858 410372**, email **techenquiries@radmat.com** or visit our website **www.radmat.com** **July 2018**

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Delivery conditions

Delivery form

Standard delivery form is a *'supercube'*. Deliveries are on a curtain-side or optional flat-bed articulated vehicle. One supercube containing approximately 15m^3 and is approximate are 2400 x 2400 x 2500mm. A full articulated truck load contains 5 supercubes or approximately 70m^3.

ProTherm G XENERGY Ultra Inverted Roof Insulation is available shrunk wrapped on pallets to special order, quantity depending on board thickness. Deliveries are on a rigid curtain-side or optional rigid flat-bed vehicle. A full rigid truck contains 12 pallets (the equivalent of 3 supercubes).

Unloading

Supercubes are intended to be unloaded and crane lifted using strops in 2 movements;
1. lift the *supercube* clear of the vehicle and allow to settle
2. lift the *supercube* to roof level

Fork extensions can also be used to unload a supercube, and can be supplied with the delivery if requested in advance.

Palletised ProTherm G XENERGY Ultra Inverted Roof Insulation can be unloaded using a pump truck.

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. Batch number.

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Ultra Inverted Roof Insulation

PRODUCT DESCRIPTION	
Appearance top side	Grey Skin
Core	Grey color, HFC free, Extruded polystyrene foam XPS (EN13164). EN designation code T1-CS(10\Y)300-CC(2/1,5/50)110-WL(T)0,7-WD(V)3-FT2-DS(TH)-DLT(2)5

DECLARED PERFORMANCE				
Essential characteristics	**Performance**	**Unit**	**EN Code**	**Standard**
Ozone Depletion Potential	Zero	-	-	-
Global Warming Potential	< 5	-	-	-
Density (aim, foam only)	34	kg/m³	-	BS EN 1602
Dimensions and tolerances				
- Thickness	80, 105, 130, 145, 175, 205	mm	-	BS EN 823
- Width	600	mm	-	BS EN 822
- Length	1250	mm	-	BS EN 822
Thermal conductivity				
Declared value (1)				
- Thickness 80 - 205 mm	0.027	W/mK	λ_D	BS EN 13164
Design value (1)				
- Thickness 80 - 205 mm	0.028	W/mK	λ_D	BS EN 13164
E-Modulus (typical)	12 - 20	MPa	CC(2/1.5/50)oc	BS EN 826
Mechanical properties				
- Compressive strength at 10% deformation	300	kPa	CS(10\Y)300	BS EN 826
- Design load 2% max. deflection (50 years)	110	kN/m²	CC(2/1.5/50)oc	BS EN 1606
Hygrometric properties				
- Long term water absorption by immersion (28 days)	< 0.7	vol %	-	BS EN 12087
- Long term water absorption by diffusion		vol %	-	BS EN 12088
- dN ≥50 mm to <80 mm	≤ 2	vol %	WD(V)	BS EN 12088
- dN ≥80 mm	≤ 1	vol %	WD(V)	BS EN 12088
- Water vapour diffusion resistance factor (μ), typical	150	vol %	-	BS EN 10456
- Freeze/thaw, after 300 cycles	< 1	vol %	FTCD	BS EN 12091
- Dimensional stability under specified temperature and humidity conditions	≤ 5	%	DS(70,90)	BS EN 1604
- Deformation under specified compressive load and temperature conditions	≤ 5	%	DLT(2)5	BS EN 1605
Reaction to fire	Class E	-	Euroclass	BS EN 13501-1 2016
Linear thermal expansion coefficient	0.07	mm/m.K	-	-
Maximum service temperature	-50/+75	°C	-	-
Capillarity	0	-	-	-
Surface	Skin	-	-	-
Edge profile	Shiplap	-	-	-

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

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