

# PROTEUS PRO-FELT® ULTIMA PLUS ANTI-ROOT MINERAL CAPSHEET



PRODUCT DATASHEET

V1.0 | SEPTEMBER 2024

## PRODUCT DETAILS



Product name **Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet**  
Product type Torch-on anti-root capsheet

## PRODUCT DESCRIPTION

**Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet** is a prefabricated waterproofing membrane.

It is composed of distilled bitumen and elasto-plastomeric polymers (APP), and reinforced with non-woven polyester fabric to give the membrane high mechanical properties, and is specifically designed for waterproofing structures where the presence of vegetation is expected.

The combination of the reinforcement, the waterproofing mass characteristics and suitable additives with special chemicals ensure high resistance against the penetration of roots and aggressive chemicals, such as fertilisers, herbicides, etc. whilst not affecting the life and health of plants. Additives are not leached by water and are resistant to the action of the blowtorch flame used for the application, therefore, the product exerts its function permanently.

## APPLICATION

**Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet** is appropriate for use on the following roof substrates:

- Concrete substrates
- Metal substrates
- Timber substrates

**Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet** is used as a finishing capsheet on the following roof types:

- Green roofs
- Blue roofs
- Underground structure
- Podium decks

**Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet** is also suitable for use with the **Proteus Hot Melt®** waterproofing system.

## INSTALLATION

### Surface preparation

- Repair Substrate defects such as holes, voids, tears, and cracks, using suitable materials
- All loose and friable material must be removed by mechanical means where necessary
- Oil, dust, and debris should be removed by brush and vacuum
- Any defective or decayed areas of the substrate or insulation should be cut out, repaired, and reinstated to provide a solid base
- Surfaces should be sound, clean, dry, free from defects, visible dampness, fungal growth, and corrosion

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- Adhesion tests may be required to confirm substrate suitability before installation
- All details should be primed prior to installation.

### Installation

- All lap joints must be overlapped and completely sealed as per the following table:

Lap Dimensions (mm)	
Side Laps	80
End Laps	100
Upstands	100

Overlaps should be heat welded, ensuring a continuous 5mm bitumen bead extruding from all laps

- Lay all overlaps with the slope
- Position the membrane sheets staggered, and starting from the lowest point, avoiding creating any overlaps against the slope
- Apply by torch application a **250mm** strip of membrane along all vertical up stands
- Cut the corners of the membrane sheet at a **45°** angle (100mm x 100mm)
- Side laps should be a minimum of **80mm** and end laps should be a minimum of **100mm**
- Apply the vertical membrane making sure that it overlaps the horizontal one by at least **100mm**, heating it with a gas torch and squeezing it with a trowel until a bead of compound appears from underneath
- The height of the verticals must be equivalent or superior to the finished surface by at least **150mm**
- The second layer of membrane will be applied astride and over the first one, always in the same direction, and approximately **1/4** of its length from the previous sheet
- Bond the Proteus Pro-Felt® Anti-Root Mineral Capsheet with a propane gas torch to the underlay.
- It is necessary to heat the entire surface, except for the side & head laps
- All lap joints must be completely sealed, with a continuous **5mm** bitumen bead extruding from all laps
- Use a suitable roller to apply pressure over the surface of the membrane to ensure adequate adhesion
- On vertical surfaces greater than **2m** or on very sloped substrates, apply suitable mechanical fixings to the head laps ensuring they are then sealed

### CERTIFICATION

Type	Name	Reference
BBA	Proteus Pro-Felt® Ultima Plus	22/6147

### TECHNICAL INFORMATION

Characteristic	Value	Unit	Standard
Weight	5	kg/m <sup>2</sup>	-
Thickness	4	mm	-
Visible defects	No	-	EN 1850-1
Cold flexibility	-10	°C	EN 1109

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Characteristic	Value	Unit	Standard
Flow resistance	+120	°C	EN 1110
Flow resistance after ageing	+110	°C	EN 1296
Straightness	< 20	mm/10 m	EN 1848-1
Watertightness	60	kPa	EN 1928
Maximum tensile strength (L/T)	850/650	N/50 mm	EN 12311-1
Joint strength (shear resistance)	750/550	N/50 mm	EN 12317-1
Elongation (L/T)	40/40	%	EN 12311-1
Resistance to tearing (L/T)	200/200	N	EN 12310-1
Resistance to static loading	20	kg	EN 12730
Resistance to impact	1250	mm	EN 12691
Dimensional stability	-0,3	%	EN 1107-1
Reaction to fire	F	-	EN 13501-1
Watertightness after artificial ageing	60	kPa	EN 1296
Resistance to root penetration	Pass	-	EN 13948
Loss mineral	30	%	EN 12039

## SIZE, FINISH AND COLOUR

Product Code	Length (m)	Width (m)	Weight (kg)	Colour	Finish
FUPCSMAR08	8	1	40	Black	Mineral

## SHELF LIFE AND HANDLING

- Rolls and pallets should not be stacked for storage or transport to avoid possible deformations which may compromise installation
- The rolls are to be stored in an upright position, in a dry and ventilated area, away from heat sources and above **0°C** prior to application
- The rolls that are temporarily stored on the roof before application, should be kept elevated by being left on their own pallets and should be covered and protected from the elements
- Should the workability of the material deteriorate or become stiff and difficult to install during application due to incorrect storage, these should be returned to a heated storage area and substituted with new rolls

## MATERIAL

Core: Elasto-plastomeric polymer bitumen membrane (APP) + anti-root additive  
Reinforcement: Polyester

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## PACKAGING

Felt rolls wrapped with paper seal.

## LIMITATIONS OF USE

- For professional use only
- The application must be done at temperature higher than **5°C**
- The application must be halted during adverse weather conditions

## CHEMICAL PROPERTIES, SAFETY GUIDANCE AND DISPOSAL

Please refer to **Proteus Pro-Felt® Ultima Plus Anti-Root Mineral Capsheet** [Material Safety Datasheet](#).

## GUARANTEES

Defects arising from lack of maintenance or abnormal use may fall outside of the cover of the Proteus Waterproofing guarantee.

## GUIDELINES AND STANDARDS

It is the responsibility of the Contractor to thoroughly familiarise themselves with all relevant Codes of Practice and Building Regulations to the works or referred in the specification.

Proteus Waterproofing take no responsibility for misinterpretation or lack of knowledge for third parties.

The works shall be carried out in accordance with the requirements of:

- **BS 6229** Flat roofs with continuously supported flexible waterproof coverings - Code of practice
- **BS 8217** Reinforced bitumen membranes for roofing - Code of practice
- **BS 8000-0** Workmanship on construction sites - Introduction and general principles
- **BS 8000-4** Workmanship on building sites - Code of practice for waterproofing
- **LRWA** [Design Guide for Specifiers](#)
- **S2T** [Safe to Torch](#)
- **GRO** [Code of Best Practice](#)