



## TECHNICAL DATASHEET

Reference Date:  
Version 1.1, May 2023

### PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Proteus Pro-Felt® Endura SA Mineral Anthracite  
**PRODUCT TYPE:** Felt  
**PRODUCT/SKU CODE:** FTECSMTO07  
**PRODUCT DATASHEET REFERENCE:** TDS\_FTECSMSA07\_Proteus Pro-Felt® Endura SA Mineral Anthracite\_V1.1\_110523  
**COMPANY:** Proteus Waterproofing Ltd, 21a Sirdar Road, Brook Road Industrial Estate, Rayleigh, Essex SS6 7XF, United Kingdom  
**CONTACT NUMBER/EMAIL ADDRESS:** +44 (0)1268 777871/ enquiries@proteuswaterproofing.co.uk

### PRODUCT DESCRIPTION

Proteus Pro-Felt® Endura SA Mineral Anthracite is a cold-applied, self-adhesive bituminous cap sheet which is saturated and coated with high quality SBS (Styrene-Butadiene-Styrene) modified bitumen. It has a strong 280g/m<sup>2</sup> polyester/glass composite reinforcement and features integrated 'safe-seal' lap technology, facilitating secure, safe and efficient sealing of side-laps. The upper layer of the membrane is protected with slate mineral and the bottom layer is coated with self-adhesive compound, covered with removable film. In addition, Proteus Pro-Felt® Endura SA Mineral Anthracite incorporates a special graphite additive within the membrane to provide enhanced fire performance properties.

Proteus Pro-Felt® Endura SA Mineral Anthracite is designed for use as a premium cap sheet (top layer), and is ideal for use within cold-applied roofing systems. It is typically used within Proteus' self-adhesive or torch-safe specifications and is compatible with Proteus Pro-Felt® Endura SA Underlay Sanded and Pro-Prime® SA.

### APPLICATION & USE

#### APPLICATION

Proteus Pro-Felt® Endura SA Mineral Anthracite should be installed in accordance with manufacturer recommendations and all relevant national standards and codes of practice, including BS 8217: 2005 – the code of practice for reinforced bitumen membranes for roofing.

Roofing contractors should also be fully conversant with the guidelines set out in the National Federation of Roofing Contractors (NFRC) 'Safe2Torch' campaign. If hot air guns are used during application, operatives should be competent, conversant and capable of using such items in a safe and responsible manner. Care must also be taken when using hot air guns in close proximity to combustible materials, decorative coatings and heat sensitive materials.

#### PREPARATION

In order to install the Proteus Pro-Felt® Endura SA Mineral Anthracite membrane correctly, ensure that the surface is dry, free of oil, fat and dust and other impurities. All substrates (including thermal insulation) and detailing areas should be primed with Pro-Prime® SA which has been specially formulated to react with the self-adhesive coating in order to create a strong bond.

We recommend that self-adhesive membranes such as Proteus Pro-Felt® Endura SA Mineral Anthracite are rolled into position and allowed to settle prior to their application. The membrane should always be installed with a minimum 80mm joint overlap. Ambient and surface temperatures during the application should be at least + 5°C.

#### Proteus Waterproofing Limited

21a Sirdar Road  
Brook Road Industrial Estate  
Rayleigh  
Essex SS6 7XF

Tel: 01268 777 871  
Email: [office@proteuswaterproofing.co.uk](mailto:office@proteuswaterproofing.co.uk)  
[www.proteuswaterproofing.co.uk](http://www.proteuswaterproofing.co.uk)

## INSTALLING THE MEMBRANE

The membrane is applied by pulling off the bottom separating film while simultaneously rolling out the sheet. The release film should be removed by hand and disposed of responsibly to prevent it blowing across the roof. Any overlapping membrane at a t-joint connection must have a diagonal cut over the width of the overlapping. The diagonal sheet edge must be cut off with a knife at approximately 45°.

During the application of Proteus Pro-Felt® Endura SA Mineral Anthracite we recommend using a weighted roll bar or tube in order to help provide a uniform, strong bond. After application, the installed membrane should be rolled again to remove any entrapped air and further consolidate the bond with the substrate.

Following the application of Proteus Pro-Felt® Endura SA Mineral Anthracite, the joint overlap must be thermally activated (eg. with hot air).

## SAFE-SEAL LAP METHODOLOGY

The product's 80mm wide side selvedge consists of two key elements: The first 40mm of selvedge (the inner element) features a self-adhesive release film which, once removed, enables the adjacent membrane to be securely bonded without the need for heat – only a pressure roller is required. The outer 40mm of the selvedge is then bonded in a traditional manner using either hot air or naked flame, depending on the type of system being installed.

This 'safe-seal' lap technology not only dramatically reduces the risk of any naked flame or heat penetrating through to a potentially combustible substrate (e.g. insulation), it also allows for more efficient installation as only half of the selvedge needs to be manually welded using a hot air gun or torch.

Any overlaps on the mineral chippings must be sealed with a gun or torch (>3000 W). All joint overlaps should be unrolled with a draw roll.

During installation it is important to ensure that a visible bead of bitumen exudes from all side and end laps.

## MATERIAL

<b>Reinforcement:</b>	Polyester (280g/m <sup>2</sup> )
<b>Compound:</b>	Self-adhesive elastomeric modified bitumen
<b>Upper Finish:</b>	Mineral/Slate
<b>Lower Finish:</b>	Release film
<b>Intended Use:</b>	Capsheet
<b>Application Method:</b>	Self adhesive

## WEIGHT

40kg roll

## FINISH & COLOUR

Upper Finish: Mineral

Colour: Anthracite

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## PACKAGING

Proteus Waterproofing felt label tape

## PACK SIZE/UNIT OF MEASURE

- Rolls sold individually.
- Please refer to the table below in the 'Size & Dimensions' section for more information.

## CHEMICAL PROPERTIES

Proteus Pro-Felt® Endura SA Mineral Anthracite is water-resistant and is resistant to watery solutions of salt, diluted non-oxidising acids and bases. Aliphatic and aromatic hydrocarbons, as well as chlorine hydrocarbons, oils and greases may loosen the product and should therefore be avoided.

Please note that the colour of the granules can vary during their useful life due to the effect of the weather and other outside agents.

## SIZE & DIMENSIONS

Product Name	Product Code	Roll Dimensions (m)	Weight (kg/m <sup>2</sup> )
Proteus Pro-Felt® Endura SA Mineral Anthracite	FTECSMSA07	7.5 x 1.0	6.3

## SHELF LIFE

Not applicable.

## HANDLING

The performance of self-adhesive membranes can be compromised if they are stored incorrectly. In general terms, self-adhesive membranes should be stored upright in a cool, dry place and protected from direct sunlight. The product should never be stored on any roofs where the temperature is expected to drop to 5°C or less. If these guidelines are not adhered to there may be installation issues, with shrinkage/ruckling of the membrane potentially occurring as the temperature rises. It is equally important not to store the rolls in direct sunlight, as this can activate the tack within the self-adhesive coating, making it difficult to remove the release film during application. The product should also be installed within 3 months of delivery, otherwise the surface must be primed with a suitable primer (please contact Proteus for further details).

- The rolls are to be stored in an upright position, indoors in a dry and ventilated area, away from heat sources. It is recommended to store the product at temperatures above 0°C.
- Avoid the stacking of rolls and pallets for storage or transport as this may cause possible deformations which may compromise a perfect installation.
- For information on handling, please refer to the material safety datasheet.

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## TECHNICAL INFORMATION

Properties	Test Method		Declared Performance
Length	DIN EN 1848-1	m	≥ 7.50
Width	DIN EN 1848-1	m	≥ 1.0
Straightness	DIN EN 1848-1	mm/10 m	< 20
Mass per unit area	DIN EN 1849-1	kg/m <sup>2</sup>	6.3 (± 5%)
Thickness	DIN EN 1849-1	mm	4.2 (-5/+10%)
Water tightness	DIN EN 1928 Method B	-	passed
Tensile properties: maximum tensile force	DIN EN 12311-1	N/50mm	1400 / 1300 (± 15%)
Tensile properties: elongation	DIN EN 12316-1	%	4 (± 2 abs)
Dimensional stability	DIN EN 1107-1	%	0.18 (± 0.09)
Flexibility at low temperatures	DIN EN 1109	° C	≤ - 25
Resistance to thermal distortion	DIN EN 1110	° C	≥ + 100
Reaction to fire	DIN EN 13501-5	-	Class E

## ADDITIONAL INFORMATION

### KEY FEATURES

- Flame free, self-adhesive application
- Incorporates graphite technology which actively prevents spread of flames on the roof
- Excellent low temperature flexibility at -25°C
- SBS modified bitumen
- 280g/m<sup>2</sup> polyester/glass composite reinforcement
- Integrated 'Safe-Seal' laps to enable homogenous, efficient sealing of side laps

### QUALITY ASSURANCE

Proteus Pro-Felt® Endura SA Mineral Anthracite is manufactured following ISO 9001: 2008 Quality Management System and Environmental Management System approved to ISO 14001: 2004.

## CODES OF PRACTICE & STANDARDS

1. 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.
  2. The works shall be carried out in accordance with the requirements of;
    - BS 6229:2018 - Flat roofs with continuously supported flexible waterproof coverings -Code of practice.
    - BS 8217:2005 - Reinforced bitumen membranes for roofing Code of practice.
    - BS 8000-0:2014 - Workmanship on construction sites - Introduction and general principles.
    - BS8000-4:1989 - Workmanship on building sites - Code of practice for waterproofing.
    - GRO Green Roof Code of Best Practice - Latest Edition.
    - LRWA Design Guide for Specifiers - Latest Issue.
    - LRWA Hot Melt Code of Practice - Latest Edition.
- Please refer to Proteus Waterproofing's Technical department for project specifications.

## OPERATION

- For professional use only.

## SAFETY GUIDANCE

- Use as per Proteus Waterproofing installation instructions/guidance.
- For safety information, please refer to the material safety datasheet.

## LIMITATIONS OF USE

- Not applicable.

## MAINTENANCE FOR WATERPROOFING

1. A flat roof should be inspected at least twice yearly; in autumn to ensure it is clear of leaves, dirt and debris, outlets are not blocked and the roof is free draining; in spring to discover and rectify any damage due to weather. Green, blue and other specialist roofs should be inspected in accordance with the designer's original inspection plan.
2. Inspections should include the following elements:
  - 2.1. Examination of ceilings for signs of water penetration or condensation followed by examination of external walls, eaves and soffits for signs of movement;
  - 2.2. The roof should then be inspected for any signs of damage to, or displacement of, the individual layers of construction including, as appropriate, the waterproofing layer, the thermal insulation, the WFRL, the surface protection and flashings;
  - 2.3. The location and extent of any build-up of leaves, moss, plants or debris should be recorded; and
  - 2.4. The mountings of roof top installations such as safety barriers, fall arrest posts, harness bolts and satellite dishes should be examined to ensure their attachment remains waterproof.

3. Maintenance of a flat roof should involve:
  - 3.1. Removal of all accumulated leaves, dirt and debris;
  - 3.2. Clearance of rainwater outlets, downpipes and gutters;
  - 3.3. Replacement of any surface protection which has been dislodged or removed; and
  - 3.4. Cleaning of vents to the underside of a cold roof.
4. Repair/Renewal:

Should inspection discover the need for repair or replacement of any part of the roof, the work should be undertaken as soon as possible but only after appraisal of the original roof design and assessment of the need for modification or improvement. Repairs should be undertaken using materials and techniques compatible with the original work and, if still under an original guarantee, by the original installer. If it is decided to renew part or all of a flat roof, a full assessment of the design should first be undertaken in accordance with Clauses 4 to 6 of **BS6229:2018**. All works of inspection, repair and renewal should be recorded in the owner's building information manual.

## ADDITIONAL MAINTENANCE REQUIREMENTS

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- No additional requirements. See information above.

## GUARANTEES

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

## DISPOSAL

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For information on disposal and environmental hazards, please refer to section 13 of the material safety datasheet.