



TECHNICAL DATASHEET

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PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Proteus Pro-Cold®

PRODUCT TYPE: Waterproofing Liquid Applied Membrane

PRODUCT/SKU CODE: PCMONO0

PRODUCT DATASHEET REFERENCE: TDS_PCMONO_Proteus Pro-Cold_V3_090523

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-Cold® is a high performance, cold applied, seamless, elastomeric, liquid applied membrane for waterproofing exposed and protected flat and pitched roof areas.

It is a single pack, moisture triggered polyurethane, quickly resistant to rain at application stage and can cure under water without gassing or foaming. It is designed to provide a monolithic, waterproof, liquid applied membrane that does not brittle with age.

The excellent and long lasting performance of Proteus Pro-Cold® liquid applied membrane is provided by the combination of the Pro-Force reinforcement and the Proteus Pro-Cold® polyurethane characteristics.

APPLICATION & USE

METHODS OF APPLICATIONS

Suitable Surfaces:

- Concrete and screeds
- Metal
- WBP plywood / Timber
- Existing asphalt
- Existing bituminous felt membranes
- Existing single ply membranes
- Proteus Pro-Therm insulations

Note: Some surfaces may require priming or sacrificial layers.

Variants:

- Protected Built-Up Roof systems
- Warm Built-Up Roof systems
- Cold deck Liquid Applied Membrane
- Warm deck Liquid Applied Membrane
- Gutters Liquid Applied Membrane
- Metal profiled roof sheets protective coating

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PRIMING

Proteus Pro-Cold® is bitumen compatible and can be installed without primers onto clean, unpainted existing asphalt and existing bituminous felt membranes.

- **New Concrete and screeds:**
Cold Melt® DPM Primer @ a minimum consumption rate of 0.40kg/m².
- **New asphalt, metal surfaces:**
Pro-Epoxy Primer @ a minimum consumption rate of 0.20ltr/m².
- **Metal surfaces spot priming:**
Pro-Metal Primer @ a minimum consumption rate of 0.10ltr/m².
- **Friable surfaces:**
Pro-Sealer WB @ a minimum consumption rate of 0.20ltr/m².
- **Substrates to receive Pro-Vapour Control/Carrier Membrane SA:**
Pro-Prime® SA @ a minimum consumption rate of 0.20ltr/m².
- **Cured Pro-Cold® reactivation:**
Pro-Reactivation Primer @ a minimum consumption rate of 0.10ltr/m².

For best results apply the Proteus Pro-Cold® by medium pile roller on the main surfaces and by brush on details.

In order to suitably adhere the fully reinforced Proteus Pro-Cold® liquid applied membrane, the substrate shall be prepared in such a way that it is suitable for the system, i.e. there is no bond breaking contamination or deformation and no smooth shiny surface patina.

Ensure all surfaces are sound, clean and dry, free from defects, visible dampness, fungal growth, dust, dirt particles and any other form of contamination before continuing. All loose and friable material must be removed (use mechanical means if necessary). Surfaces must be dry, above the dew point and ready for preliminary trials to confirm the required surface preparation. Carry out adhesion tests as required to ensure bond is achieved.

Coordinate the operations in a way to not cause damage to the construction elements. Avoid to leave the structure for the night or for periods of prolonged work interruptions without having been properly sealed.

The minimum finished fall must be at least 1:80 in accordance with BS6229:2018. this to guarantee a proper run off of rainwater.

The water drainage spouts should be of sufficient capacity to allow for rain water to drain off the roof in an efficient way.

Prepare substrates, including verticals and details, with the appropriate Proteus Waterproofing primer.

Allow this to cure before proceeding with any other operation.

The liquid applied membrane must be applied onto the sound and prepared substrate and achieve full adhesion. All details, perimeters, verticals, change of slope as well as projecting area must be fully adhered.

APPLICATION

On the prepared and primed horizontal and vertical surfaces, apply Proteus Pro-Cold® base coat by medium pile roller and brush, approximate consumption 1.0ltr/m² on smooth surfaces / 1.50ltr/m² on rough and porous surfaces.

Throughout the base coat wet film embed Pro-Force 225g/m² reinforcing matting to saturation, overlapping the Pro-Force 225g/m² matting by a minimum of 75mm. Allow to cure.

Over the cured, fully reinforced base coat, apply Proteus Pro-Cold® top coat by medium pile roller and brush, approximate consumption of 0.50ltr/m² (10-years system) / 0.75ltr/m² (15-years system) / 1.0ltr/m² (20-years system) / 1.20ltr/m² (25 year system). Allow to cure before proceeding with any other operation.

The height of the verticals must be a minimum 150mm from the finished surface. Verticals and details may require the Proteus Pro-Cold® topcoat to be applied in more than one application to achieve the require Dry Film Thickness (DFT).

For a skid-inhibiting finish (maintenance/fire escape routes) over the completed, cured Proteus Pro-Cold® topcoat, apply Proteus Pro-Cold® aggregate coat @ a minimum 0.30ltr/m² by medium pile roller and broadcast Pro-Aggregate EM 0.50-1.00mm @ a minimum consumption rate of 2.0kg/m². Allow to cure. Sweep off loose aggregate and apply Proteus Pro-Cold® sealer coat over the aggregate areas @ a minimum consumption rate of 0.30ltr/m².

Other typical surface finishes over the cured Proteus Pro-Cold® liquid applied membrane:

- Bonded tiles over the cured Liquid Applied Membrane
- Paving slabs on supports.
- Decking systems on supports

Finishes such as tiles / paving slabs should comply with 2000/553/EC.

RECOMMENDATIONS

To ensure best results and guarantee the maximum performance and durability of the Liquid Applied Membrane, some fundamental rules must be followed.

- The liquid applied membrane tins 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 room temperature and temperatures above 0°C. Should the workability of the material deteriorate or become stiff and difficult to install during application, these should be returned to the heated storage area and returned to use once the product has warmed. The products should be protected from the weather.
- The application surface must be smooth dry & clean.
- The application surface must be previously treated with a suitable primers, to eliminate dust and enhance the adhesion of the liquid applied membrane.
- The application surface must not have any depressions to avoid the risk of ponding water. The minimum finished fall must be at least 1:80 in accordance with BS6229:2018, this to guarantee a proper run off of rainwater.
- The application must be carried out between low/high temperature range (2°C to +35°C).
- The application must not be carried out in adverse weather conditions (high humidity, rain, etc.).
- The materials on stock must be rotated following a first in first out rotation.

MATERIAL

Liquid Applied Membrane:	Single pack polyurethane membrane
Reinforcement:	Pro-Force 225g/m ² E-Glass matting bound with an emulsion binder
Upper Finish:	Smooth or aggregate finish
Lower Finish:	Single pack polyurethane membrane
Intended Use:	Flat and pitched roofs
Application Method:	Medium pile roller / brush

WEIGHT

- 5.5 litre tin: 8.25kg
- 15 litre tin: 23kg

FINISH & COLOUR

- Upper Finish: Smooth or with aggregate finish
- Colour: RAL7015- Slate Grey/RAL7038- Light Grey

PACKAGING

Sealed, labelled tin.

PACK SIZE/UNIT OF MEASURE

- 5.5 litre tin
- 15 litre tin

CHEMICAL PROPERTIES

For product specific chemical information, please refer to the material safety safety datasheet.

SIZE & DIMENSIONS

- 5.5 litre tin: 230mm (H) x 220mm (W)
- 15 litre tin: 275mm x ? 305mm (W)

SHELF LIFE

9 months from date of production if stored properly in original, unopened sealed packaging.

HANDLING

- Store in original, unopened and undamaged sealed packaging in dry conditions in a low/high temperature range of >5°C to <25°C
- Store in an upright position to avoid spillage.
- For information on handling, please refer to the material safety datasheet.

TECHNICAL INFORMATION

Specific weight UNI EN ISO 2811-1:	1.50 ± 0.03 g/ml
Viscosity at 20°C UNI EN ISO 2555:	18.000 mPa .s
Solid content EN ISO 3251:	83±1% by volume, 87% by weight
Theoretical consumption:	2.000 -2500 g/m ²
Thickness:	1000-1250 µm
Curing at 22°C, 50% R.H.:	Dry to the touch: 4-6 hours
	Insensitive to rain: 6 hours
	Over-application: 24 hours
	Completely cured: 10 days
Permeability to carbon dioxide EN 1062-6:	Sd > 50 m
Permeability to water vapour EN ISO 7783-2:	Sd < 5 m
Capillary absorption and permeability to water EN ISO 1062-3:	< 0.1 kg/m ² · h ^{0.5}
Adhesion to concrete (traction) EN 1542:	> 6 MPa
Tensile strength UNI EN 12311-2:	> 6 MPa
Elongation at failure UNI EN 12311-2:	> 600 % (Unreinforced)
Shore A Hardness EN ISO 868:	70

ADDITIONAL INFORMATION

PRODUCT KEY FEATURES:

- Suitable for warm roof and overlay applications
- European fire classifications of BROOF(t4)
- Cold installed, elastomeric and seamless waterproofing membrane - no lap-joints
- Moisture triggered curing - Shower proof at 30 minutes
- Low/high temperature application range of 2°C to +35°C
- Awkward details easily dealt with
- UV stable, resistant to diluted acids and alkalis, oil, petrol, diesel, vegetable oils and fruit acids
- Proteus Pro-Cold® systems can be overcoated at the end of their designed life to extend the service life of the Proteus Pro-Cold® liquid applied membrane, reducing lifecycle costs and landfill waste.

CERTIFICATION

- BBA Certified 30 years - Certificate No. 22-6497

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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 prior to installing the Proteus Pro-Cold® system. 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.
- BS 8000-4:1989 - 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.
- Only Proteus Waterproofing Ltd trained and approved installers to use this product.

SAFETY GUIDANCE

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

LIMITATIONS OF USE

Not suitable to be buried. Refer to Proteus Waterproofing for buried waterproofing membranes.
Further Information

Refer to Proteus Waterproofing Application Guides and Specifications for components, preparation and installation guidance. All products should be installed in accordance with the manufacturer's instructions. The manufacturer cannot be held responsible where conditions of use are beyond its control. Proteus Waterproofing Limited products are available for sale in accordance with Proteus Waterproofing Limited standard conditions of sale, which are available upon request. Whilst any information contained herein is to the best of our knowledge true and accurate, no warranty is given or implied in connection with any recommendations, agents, or distributors, as the conditions of use and any labour involved are beyond our control. Our warranty is therefore limited to the quality of supplied product.

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

- No additional requirements. See information above.

GUARANTEES

Proteus guarantees are available, subject to the current terms and conditions which are available separately on request.

DISPOSAL

The Hazardous Waste (England & Wales) (Amendment) Regulations 2016, The Special Waste Amendment (Scotland) Regulations 2004 and, The Hazardous Waste Regulations (Northern Ireland) 2005, state that all waste products which are classified as hazardous must be disposed of in the appropriate manner. Once cured, Proteus Pro-Cold® forms an inert, non-hazardous plastic material that does not require specialised waste removal. All liquid material must be fully cured before disposal and it is recommended that hazard labels are either removed, covered or marked as "neutralised" to avoid possible misunderstanding as these hazards relate to the product in liquid form only.

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

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