

Legal Requirements

CDM Regulations:

The Construction (Design and Management) Regulations 2015 came into force on 6th April 2015 and governs the appropriate health and safety measures of duty holders to ensure the safe operation of construction sites.

The client and/or contract administrator must appoint competent personnel to oversee adherence to all necessary regulations under CDM and that relevant duty holders have the appropriate information. Tremco CPG UK Ltd are not considered the Principal Designer and works should only commence once all relevant authorities concur that the requirements of CDM have been fulfilled.

Further information can be obtained from <https://www.hse.gov.uk/pubns/books/l153.htm>

Diisocyanates Training:

REACH Regulations now state that products containing more than 0.1% of diisocyanates, including polyurethane products such as adhesives, sealants, or coatings, require mandatory Level 1 training for staff who directly handle these substances for professional use. We recommend you discuss any training requirements with your employer before application of product.

Further details and online training can be found at - <https://safeusediisocyanates.eu/>

Personal Protective Equipment

For basic application of the POWERply bitumen membrane products within an exposed environment that provides limitless ventilation, the following basic levels of personal protective equipment (PPE) must always be worn.

- Safety glasses with suitable side-shields.
- Suitable flame and heat-resistant gloves.
- Impermeable rubber gloves, such as Butyl, Nitrile or Fluocarbon that will be appropriate for adhesive and primer handling.
- Basic protective clothing. Remove and wash contaminated clothing before re-use.
- When applying adhesive or primer within confined spaces, adherence to appropriate workplace exposure limits and the potential for suitable respirators must be reviewed. Please refer to Tremco product specific safety data sheets for further guidance.

Tooling and Cleaning

To achieve efficient application and suitable finish, the following tooling should be considered.

- Flame stabilising propane gas torch with integral stand (torch applied systems only)
- Professional heat gun with a temperature emission of up to 700 °c (self-adhesive membranes)
- Stanley knife with a hook blade ideally
- Heat resistant seam roller
- Tape measure
- Metal scraper
- Seam testing probe
- Fire extinguishers. Dry powder, Carbon dioxide (CO₂), Alcohol-resistant foam
- TremStik 8m Braided Canister Hose
- TremStik Spray Primer Adhesive
- Applicator Gun & Long Wand

POWERply TO & SA

INSTALLATION GUIDE



Compatibility Consideration

POWERply reinforced bitumen membrane waterproofing is versatile and generally compatible with common building materials. However, care should be taken when exposing any bitumen-based products to solvent based liquids such as acetone or white spirit. Surface spills should be cleaned immediately with soap and water.

Aggressive acid cleaners, naked flames, hot swarf, surface temperature exceeding 100°C, or abrasive tooling should not be placed in prolonged contact with POWERply waterproofing products.

Should a material type present a compatibility concern, seek advice from the Tremco Technical Services before application.

Application standards

Tremco CPG UK Ltd recommends review of BS 8271:2005 'Reinforced Bitumen Membranes for Roofing – Code of Practice' for additional best practises, health and safety, and design requirements. Further information can be found at - <https://knowledge.bsigroup.com/products/reinforced-bitumen-membranes-for-roofing-code-of-practice>.

The design, construction, and installation aspects of BS 6229:2025 'Flat roofs with continuously supported flexible waterproof coverings' should be considered during application. The Tremco project specific specification can assist with many design considerations during construction and provide clarity regarding suitable detail installation.

Training recommendations

For competent installation of any liquid applied membrane system, Tremco CPG UK Ltd recommends that relative qualifications are obtained by at least one experienced operative on site. These qualifications can relate to a skilled labour CSCS card (blue) NVQ level 2, LRWA Specialist Applied-Skills Program (SAP) or Tremco in-house training.

Product information

The below is a list of the basic waterproofing range of AlphaGuard PUMA system components.

Product Name	Product Code	Coverage	Unit Size	Product Use
POWERply Capping TO (Charcoal)	RW830606722	8m ²	8x1m Roll	Torch applied cap sheet within 25-year warrantied systems
POWERply Capping TO (Terracotta)	RW830606723	8m ²	8x1m Roll	Torch applied cap sheet within 25-year warrantied systems
POWERply Capping SA (Charcoal)	RW832606724	8m ²	8x1m Roll	Self-adhesive cap sheet within 25-year warrantied systems
POWERply Capping SA (Terracotta)	RW832606725	8m ²	8x1m Roll	Self-adhesive cap sheet within 25-year warrantied systems
POWERply Standard Capping TO (Charcoal)	TBC	6m ²	6x1m Roll	Torch applied cap sheet within 20-year warrantied system
POWERply Capping FLL TO	RW834606726	5m ²	5x1m Roll	Torch applied cap sheet for green roof systems
POWERply Underlay SA	RW814606727	10m ²	10x1m Roll	Self-adhesive underlay membrane within 25-year warrantied systems
POWERply Standard Underlay SA	TBC	12m ²	12x1m Roll	Self-adhesive underlay membrane and AVCL within 20-year warrantied system
POWERply AVCL TO	RW820606728	10m ²	10x1m Roll	Torch applied AVCL within 25-year warrantied system
POWERply AVCL SA	RW821606729	10m ²	10x1m Roll	Self-adhesive AVCL within 25-year warrantied system or any flame free zones
POWERply Separation & Attachment	RW810606730	12m ²	12x1m Roll	Separation or attachment layer
POWERply Walkway (Charcoal)	RW840606748	10m ²	10x1m Roll	Protective bitumen membrane for walkways
POWERply Walkway (Terracotta)	RW840606749	10m ²	10x1m Roll	Protective bitumen membrane for walkways

Find Us @



www.tremco-europe.com



Tremco CPG UK Limited
Coupland Road, Hindley Green
Wigan WN2 4HT
+44 (0) 1942 251400
roofing.uk@tremcocpg.com

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Sequence of works

General working conditions:

Atmospheric conditions should be free of precipitation, severe wind, or frost.

Application Parameters:

The below parameters set out a basic guide to the varying temperatures that can impact adhesion and material workability. Applying product outside of these limits can result in unpredictable application. We recommend measurements are taken with an infrared thermometer when temperature parameters are at risk.

Ambient Temperature	5°C to 30°C
Substrate Temperature	3°C and rising
Material Temperature	5°C to 30°C

Substrate Requirements:

All substrates must be clean, dry, free of oil, laitance, loose debris, or foreign materials such as moss, algae and any other substance that could be detrimental to adhesion. Some surfaces may require jet washing, scarifying, sandblasting, or grinding to achieve a suitable substrate.

New Concrete or Screed to Falls:

New in-situ concrete deck should conform to BS EN 206:2013 and BS EN 13670:2009. Lay the new concrete deck in accordance with the manufacturer's instructions or structural engineer's design.

New screed surface finishes to provide a minimum 1:80 finished fall as per BS 6229:2025 'Flat roofs with continuously supported flexible waterproof coverings – Code of practice' and apply in accordance with 'BS 8204-2:2003+A2:2011 Screeds, bases and in situ floorings – Concrete wearing surfaces Code of practice'.

The final surface must provide a smooth floated finish, be free from ridges, hollows, back falls, or prominent float marks that can adversely affect the new waterproofing system.

Typical density of in-situ concrete should be 2160 - 2500 kg/m³ and retain a 3 - 5% moisture by volume when cured.

Note: Concrete with high moisture content requires a minimum curing period of 28 days to achieve adequate strength and moisture levels.

Substrate Preparation:

All substrates must be relatively smooth and consistent. Where necessary, carry out remedial repairs to minor surface cracks, splits, or holes that may provide an improper finish.

Adhesion Test:

Before direct application of reinforced bituminous membranes to unidentified or foreign materials, preliminary adhesion tests must be undertaken to confirm satisfactory adhesion or identify any additional preparation requirements.

Note: Should adhesion failure occur, please contact Tremco Technical Services for further advice and support.

Primer Application:

All substrates that receive POWERply torch applied or self-adhesive products must be suitably primed with TremStik Spray Primer only. The use of third-party primers or bitumen cut back primers are not deemed compatible with POWERply bitumen membrane system.

Apply TremStik Spray Primer in one or two passes using the supplied applicator spray gun. Spray applied application should be undertaken 10-20 cm away from the designated substrate, coating should be light, and achieve a coverage rate of 12m²/L.

TremStik Spray Primer will be touch dry within 2-3 mins and ready to overlay.

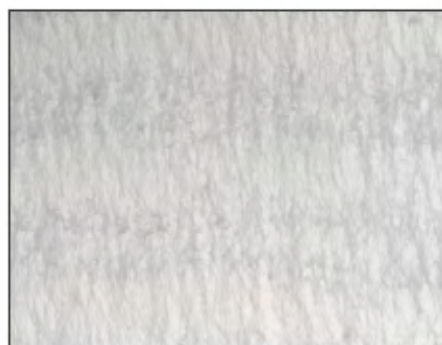
Primer Coverage Appearance:



Too Light



Too Heavy



Correct Application

Separation or Attachment Layer Application:

POWERply Separation and Attachment layer can be used to either overlay close boarded timber decks prior to application of torch applied or self-adhesive membranes. POWERply Separation and Attachment layer is also suitable as a separation layer when overlaying single ply roof systems, especially those that are manufactured from PVC and present a compatibility risk when placed in contact with bitumen.

Close Boarded Timber Decks: Nails must be at least 20 mm long, extra-large headed galvanised steel clout nails conforming to BS 1202-1. All nails should be set back a minimum of 50 mm from all membrane edges.

Single Ply Overlays: Substrate specific mechanical fasteners must be of suitable size to achieve the necessary penetration or embedment into the underlying structural deck. All fasteners should be set back a minimum of 50 mm from all membrane edges.

Loosely lay POWERply Separation and Attachment layer with 50 mm laps and secure in place with nails/ mechanical fasteners and pressure plates at minimum 150 mm centres across the field area. Alter fixing pattern around all roof perimeters, side, and end laps to a minimum of 50 mm.

Air and Vapour Control Layer (AVCL) Application:

POWERply Standard (20-year system) Self-adhesive Application

Membrane sheets should be laid perpendicular to the specified falls and all sheet ends must be evenly staggered from the preceding sheet.

Temporarily position POWERply Standard Underlay SA in place and unroll. Once positioned, partially roll back, remove protective silicone film, gently warm the self-adhesive backing with a hot air gun, and carefully roll into place with firm hand applied pressure across the entire width of the membrane. Ideally a weighted roller should be used to evenly apply pressure and achieve optimum application times.

When applying detailing membranes ensure all laps face down the roof slope to avoid negative laps. All laps are to be sealed by hot air gun with a minimum 5 mm bead of bitumen exuded.

Where possible, continue POWERply Standard Underlay SA 50 mm above the line of any thermal insulation enabling the primary underlay membrane to be dressed back creating an airtight seal.

Membrane side and end laps should be a minimum of 100 mm and 150 mm respectively. Ensure all laps face down the roof slope to avoid negative laps. All laps are to be sealed by hot air gun with a minimum 5 mm bead of bitumen exuded.

POWERply (25-year system) Torch-on Application

Field area membrane sheets should be laid perpendicular to the specified falls and all sheet ends must be evenly staggered from the preceding sheet. Position the roll of POWERply AVCL TO and begin rolling out whilst heating the reverse of the membrane with a gas torch ensuring the fusible film backing melts away exposing the bitumen core. The sanded surface must always face upwards, and the membrane applied without folds or creases that may affect the overall finish.

When applying detailing membranes ensure all laps face down the roof slope to avoid negative laps. Where safe to do so, all laps are to be sealed by gas torch with a minimum 5 mm bead of bitumen exuded.

Where possible, continue POWERply AVCL TO 50 mm above the line of any thermal insulation enabling the underlay membrane to be dressed back creating an airtight seal.

Membrane side and end laps should be a minimum of 100 mm and 150 mm respectively. When sealing onto the main field area air and vapour control layer, ensure a minimum 150 mm lap is achieved. Where safe to do so, all laps are to be sealed by gas torch with a minimum 5 mm bead of bitumen exuded.

Underlay Application:

Field area membrane sheets should be laid perpendicular to the specified falls and all sheet ends must be evenly staggered from the preceding sheet.

Temporarily position POWERply self-adhesive underlay in place and unroll. Once positioned, partially roll back, remove protective silicone film, gently warm the self-adhesive backing, and carefully roll into place with firm hand applied pressure across the entire width of the membrane. Ideally a weighted roller should be used to evenly apply pressure and achieve optimum application times.

Prior to detail membranes being applied, reinforce all vertical upstands with 200 mm wide piece of POWERply self-adhesive underlay evenly applied into the vertical and horizontal abutment.

Membrane side and end laps should be a minimum of 100 mm and 150 mm respectively. Ensure all laps face down the roof slope to avoid negative laps. All laps are to be sealed with a minimum 5 mm bead of bitumen exuded.

Cap Sheet Application:

Membrane sheets should be laid perpendicular to the specified falls and all sheet ends must be evenly staggered from the preceding sheet.

Position the roll of POWERply torch applied cap sheet and begin rolling out whilst heating the reverse of the membrane with a gas torch ensuring the fusible film backing melts away exposing the bitumen core. The mineralised surface must always face upwards, and the membrane applied without folds or creases that may affect the overall finish.

Membrane side and end laps should be a minimum of 100 mm and 150 mm respectively. Ensure all laps face down the roof slope to avoid negative laps. Where safe to do so, all laps are to be sealed by gas torch with a minimum 5 mm bead of bitumen exuded.

When sealing detail membranes onto the main field area cap sheet membrane, ensure a minimum 150 mm lap is achieved. Where safe to do so, all laps are to be sealed by gas torch with a minimum 5 mm bead of bitumen exuded.

Standard Detailing:

When installing POWERply reinforced bitumen membrane systems, design guidance set out in our standard drawing library should be adhered to ensuring the most robust details possible and compliance with our warranty standards. If in doubt, please contact a member of Tremco Technical Services for further advice.

Safe2Torch:

In accordance with the NFRC Safe2torch campaign, Tremco CPG UK Ltd officially supports this industry wide initiative to significantly reduce the risk of roof fires when using gas torches, either to dry out roofs or when used to install torch-on membranes.

To reduce risk a torch-free area of no less than 900 mm back from any combustible material must be established to comply with the contractor's public liability insurance. In these areas all torch-on products are prohibited and must be substituted for POWERply self-adhesive membranes that are applied with a hot air gun only.

Warranty Requirements

Upstand and Skirtings Details:

All upstand and skirting details should terminate a minimum of 150 mm above the finished roof level to comply with BS 6229:2025 and our warranty requirements. Any detail failing to achieve this height must be discussed with Tremco Technical Services prior to installation.

Continuity Testing:

During membrane application to ensure continuity of the waterproofing, periodic lap inspections should be taken using a seam testing probe to verify lap adhesion has been successful.

Integrity Testing (Buried Systems Only):

Should external finishes be applied that restrict future access, such as decking, paving, green roofing etc, a full roof integrity test must be undertaken by a WITA (Waterproof Integrity Test Association) approved contractor prior to finishes being laid. This testing is an additional expense to the client and a copy of this report must be submitted to Tremco Technical Services.

Drainage Outlet Inspection:

Prior to full warranty sign off, all drainage channels, outlets and internal downpipes should be inspected by CCTV camera to ensure a free flowing drainage system without blockages. Failure to undertake this type of essential review can invalidate the Tremco CPG UK Ltd warranty if unchecked blockages compromise the integrity of the new waterproofing system.

Final Inspection:

The Tremco CPG UK Ltd warranty is subject to a final inspection before any certification will be issued. Once all system components have been installed to an approved standard, Tremco Technical Services will attend site to undertake a final inspection and sign off works. The client or contractor must ensure that suitable and safe access is available upon final inspection.

Maintenance Plan:

To ensure the long-term performance of our systems, a structured maintenance plan should be organised to demonstrate good husbandry of the roof. At the minimum, we recommend an annual inspection is undertaken to review all details, perishable items such as mastic, clear drainage points, remove roof debris or identify any issue that may present immediate risk to waterproofing integrity.

Important Note: Only the original Tremco CPG UK Ltd approved contractor should undertake invasive maintenance work to ensure our system warranty remains intact. If in doubt, please contact Tremco Technical Services for assistance.