Proteus
WATERPROOFING

PRO-BW® PLUS APPLICATION GUIDE

LIQUID APPLIED WATERPROOFING MEMBRANE FOR BALCONIES, WALKWAYS AND FLAT ROOFS

PRO-BW® PLUS
Application Guide

Proteus WATERPROOFING

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INTRODUCTION

Purpose of the Guide

This Application Guide provides detailed instructions for the safe and effective installation of the Pro-BW® Plus liquid-applied waterproofing system. It is intended for use by approved contractors and installers familiar with liquid roofing applications. The guide covers preparation, application techniques, quality control, and maintenance to ensure the system achieves its certified performance and longevity. Always refer to the latest version of this guide, product datasheets, and safety datasheets for the most up-to-date information.

Overview of the Pro-BW® Plus System

The Pro-BW® Plus system is a cold-applied, liquid waterproofing membrane based on a modified polyester resin technology. It forms a seamless, durable, and flexible waterproof layer suitable for a variety of roof types, including flat, zero-fall, and pitched roofs up to 70°. The system is activated by mixing the resin with a powder catalyst and can incorporate accelerators for low-temperature applications, pigments for colour customisation, and sealers with aggregates for skid-resistant finishes.

It is certified under **BBA Agrément Certificate 22/6183** for use on limited access and pedestrian access roofs, including warm and cold exposed roofs, green roofs, protected roofs, inverted roofs, blue roofs (in combination with storm water attenuation systems), balconies, terraces, and walkways. The system provides adhesion to various substrates, rapid curing, and resistance to UV, weathering, and mechanical stress.

Scope and Limitations

This guide applies to the installation of the Pro-BW® Plus system on new-build and refurbishment projects for roofs, balconies, and walkways. It is suitable for substrates such as concrete, screeds, timber, asphalt, bituminous felt, and single-ply membranes, with priming or sacrificial layers required for certain surfaces.

Limitations include:

- Application temperatures: Typically between 1°C and 35°C (with accelerator for temperatures as low as 1°C); do not apply in rain, snow, or if rain is imminent within the curing period.
- Not suitable for internal use, swimming pools, or areas with constant water immersion unless specifically designed.
- Pedestrian access is limited to maintenance or light foot traffic unless a skid-inhibiting finish is applied.
- For inverted or buried systems, an independent electronic leak test is mandatory before covering the membrane.
- The system must be installed by Proteus-trained and approved contractors to qualify for guarantees.
- Storm water attenuation systems for blue roofs are outside the scope of this guide.

For site-specific designs or variations, contact Proteus' technical support.

Key Warnings

- The Pro-BW® Plus system involves hazardous chemicals (e.g., flammable resins and catalysts); always wear appropriate Personal Protective Equipment (PPE) and follow Safety Data Sheet (SDS) guidelines.
- Ensure adequate ventilation during mixing and application to avoid inhalation of fumes.
- Do not apply near open flames or in confined spaces without proper extraction.
- Conduct adhesion tests on all substrates prior to full application.
- Failure to follow this guide may void warranties and compromise system performance.

SYSTEM COMPONENTS

Core Components

The Pro-BW® Plus system comprises the following elements, each designed to work together for a monolithic waterproofing layer. All components are manufactured to quality standards and are covered under BBA Agrément Certificate 22/6183.

- **Pro-BW® Plus Resin** A flexible, modified polyester resin. It is the primary component, applied in base and top coats, and requires mixing with Pro-BW® Catalyst to initiate curing.
- **Pro-BW® Catalyst** A 50% dibenzoyl peroxide powder supplied in measured scoops or bags. It activates the curing process when added to Pro-BW® Plus Resin and primers.
- **Pro-Force 450** A 450 g/m² glass fibre mat for reinforcing the system. It is embedded into the wet base coat of Pro-BW® Plus Resin to provide strength and crack-bridging capability.
- **Pro-BW® Plus Sealer** A sealer coat for pedestrian access specifications, available in clear or pigmented versions. It seals Pro-Aggregate EM or other optional finishes.
- **Pro-Prime® BW** A primer for bituminous, wood, and concrete substrates. It requires Pro-BW® Catalyst for activation.

Ancillary Items

The following items may be required for specific applications or enhanced performance but are not core to the waterproofing layer. These are recommended by Proteus Waterproofing and should be sourced accordingly:

- **Pro-BW® Plus Resin Pigment** For use with unpigmented Pro-BW® Plus Resin to achieve desired colours. Available in mid-grey as standard or other colours on request.
- **Pro-BW® Plus Sealer Pigment** For use with unpigmented Pro-BW® Plus Sealer to achieve desired colours.
- **Cold Melt® DPM Primer** For substrates with high residual moisture, providing a damp-proof barrier. Refer to its separate datasheet for details.
- **Pro-Prime® Epoxy** A primer for metal details.
- **Pro-BW® Plus Resin Accelerator** An additive for maintaining cure times at temperatures as low as 1°C, added on site to Pro-BW® Plus Resin according to temperature ranges.
- **Pro-Prime® BW Accelerator** An additive for maintaining cure times at temperatures as low as 1°C.
- **Pro-BW® Inhibitor** An additive for maintaining cure times at elevated temperatures.

- **Pro-Aggregate EM** An aggregate (0.5 – 1mm particle size) for creating a skid-inhibiting finish, broadcast into wet Pro-BW® Plus Resin before sealing.
- **Pro-Quartz Sand** A quartz sand (0.7 – 1.2mm particle size) for creating a skid-inhibiting finish , broadcast into wet Pro-BW® Plus Resin before sealing.
- **GRP Trims** Factory-manufactured trims including upstand, drip, fillet, and flat types.
- **Pro-Tool Surface Cleaner** For cleaning tools and surfaces.
- Proprietary anti-fungicidal solution. For removing algae and moss prior to application (outside scope, but recommended).

Variations

- **Low-temperature application** ➡ Use Pro-BW® Plus Resin Accelerator and Pro-Prime® BW Accelerator for installations between 1°C and 3°C.
- **Coloured finishes** ➡ Incorporate Pro-BW® Resin Pigment into the resin and Pro-BW® Sealer Pigment into the sealer for custom colours.
- **Anti-slip surfaces** ➡ Add Pro-Aggregate EM or Pro-Quartz Sand broadcast into wet resin, followed by Pro-BW® Plus Sealer, for pedestrian areas.
- **Green roofs** ➡ Using plants with non-invasive roots, Pro-BW® Plus system will adequately resist root penetration, subject to routine maintenance.
- **Blue roofs** ➡ Compatible with storm water attenuation systems (attenuation outside scope).

HEALTH AND SAFETY

Risk Assessments and PPE Requirements

Prior to commencing any work with the Pro-BW® Plus system, a comprehensive site-specific risk assessment must be conducted in accordance with UK health and safety legislation, including the **Health and Safety at Work etc. Act 1974** and the **Construction (Design and Management) Regulations 2015** (CDM). This should identify hazards such as manual handling, working at height, and exposure to solvents or fumes. Method statements should be prepared and shared with all operatives.

Personal Protective Equipment (PPE) is mandatory and must comply with the **Personal Protective Equipment at Work Regulations 1992** (as amended). Minimum requirements include:

- chemical-resistant gloves
- safety goggles or full-face shields to protect against splashes and fumes
- protective clothing (e.g., overalls and boots)
- respiratory protection (e.g., masks with organic vapour filters) where fumes may be present

All PPE must be inspected regularly, and operatives should be trained in its use. First-aid kits must be readily available on site.

Handling Materials

The Pro-BW® Plus system involves handling liquid resins, powder catalysts, and accelerators, which can be irritants, sensitizers, or flammable.

- Always handle components in well-ventilated areas to minimize inhalation of vapours.

- Mix resins and catalysts carefully to avoid dust generation or spills - use mechanical mixers at low speed.
- Avoid skin contact; in case of contact, wash immediately with soap and water, and seek medical advice if irritation persists.
- Do not eat, drink, or smoke while handling materials.
- For the catalyst (dibenzoyl peroxide), which is an oxidizing agent, store and handle separately from flammable substances to prevent reactions.

Fire Risks and Precautions

Components such as Pro-BW® Plus Resin, Sealer, and pigments have flash points making them flammable or combustible.

- Store away from ignition sources, and prohibit smoking or open flames on site.
- Use non-sparking tools and ensure electrical equipment is explosion-proof if vapours are present.
- Have fire extinguishers (CO_2 or powder type) readily available, and train operatives in their use.
- In case of fire, evacuate the area and contact emergency services.
- Follow the upper and lower explosive limits for the Sealer by maintaining ventilation to keep vapour concentrations below these thresholds.

Reference to Safety Datasheets (SDSs) and CLP Regulations

Refer to the latest safety datasheets (SDSs) for each component, available from Proteus Waterproofing, for detailed hazard information, first aid measures, and disposal guidelines. Ensure SDSs are accessible on site and that all operatives are familiar with them.

All products comply with CLP (Classification, Labelling and Packaging) Regulations (EC) No 1272/2008, with appropriate hazard pictograms, signal words, and precautionary statements on labels.

Environmental Considerations

- Minimise environmental impact by containing spills with absorbent materials and disposing of waste in accordance with local regulations - do not pour residues into drains or watercourses.
- For green or blue roof applications, ensure no runoff contaminates soil or water.
- Comply with environmental permits if required, and report any incidents to the relevant authorities.

STORAGE AND HANDLING

Storage Conditions

Proper storage of Pro-BW® Plus system components is essential to maintain product integrity, prevent damage, and ensure safe handling on site. All materials must be stored in accordance with the manufacturer's recommendations.

General guidelines

- Store all Pro-BW® Plus components in a dry, well-ventilated area between 5°C and 25°C, away from direct sunlight and heat sources.

- Keep containers tightly sealed when not in use to prevent contamination or evaporation.
- Store Pro-BW® Catalyst and accelerators separately from flammable materials due to their oxidizing properties.
- Ensure storage areas are secure and inaccessible to unauthorised personnel.

Site storage should comply with UK regulations, such as the Control of Substances Hazardous to Health (COSHH) Regulations 2002, ensuring segregation from incompatible materials (e.g., no storage near acids or oxidisers).

Shelf Life

- Pro-BW® Plus Resin, Sealer, and pigments have a shelf life of 12 months from the date of manufacture when stored correctly.
- Pro-BW® Catalyst and accelerators remain effective for 24 months under proper conditions.
- Check batch numbers and expiry dates on packaging; do not use expired products.
- Contact Proteus for guidance if shelf life is exceeded.

Manual Handling Techniques

Use manual handling aids (e.g., trolleys or lifting equipment) for heavy containers to avoid strain. Lift with a straight back, bending at the knees, and avoid twisting motions. Ensure a two-person lift for containers over 25kg. Train operatives in safe lifting practices and provide rest breaks during prolonged handling.

Packaging Details and Quantities

- **Pro-BW® Plus Resin** is supplied in 10.3L metal tins.
- **Pro-BW® Catalyst** is provided in 500g bags or measured scoops.
- **Pro-BW® Plus Sealer** is supplied in 9.6L metal tins.
- **Pro-Force 450** reinforcement mat comes in 20m x 1m, 80m x 1m and 80m x 0.3m rolls.
- **Pro-Aggregate EM** is supplied in 25kg bags.
- Verify quantities against project requirements and inspect packaging for damage upon delivery.

Site Delivery and Protection

- Schedule deliveries to avoid prolonged exposure to weather; offload materials promptly.
- Protect materials from rain, snow, or extreme temperatures during transit and on site using tarpaulins or covered storage.
- Inspect deliveries for signs of leakage or damage before acceptance.
- Store delivered materials off the ground on pallets to prevent moisture absorption.

Failure to follow these guidelines may affect product performance and void guarantees. For specific queries, contact Proteus.

TOOLS AND EQUIPMENT REQUIRED

Essential Tools

The following tools are required for the safe and effective installation of the Pro-BW® Plus system. Ensure all tools are in good condition, clean, and suitable for application. Tools should be selected based on site conditions and comply with UK standards for construction safety.

- Handheld electric drills with paddle mixers (300-500 RPM) for mixing primer, resin and sealer.
- Paint rollers (9 inch) with medium pile for applying Pro-BW® Plus system components.
- Measuring jugs and buckets (5-10L capacity) for accurate mixing.
- Retractable Stanley knife for cutting reinforcement matting (Pro-Force 450).
- Cleaning brushes and cloths for tool maintenance.

Specialist Equipment

For enhanced precision, safety, or specific applications:

- Wet electronic leak detection equipment for testing inverted or buried systems.
- Forced air ventilation units for confined spaces or poor ventilation areas.
- Temperature and humidity meters to monitor application conditions.
- Protective screens or barriers for containing spills and vapours.
- Mechanical agitators for large-scale mixing (optional, for high-volume projects).
- Safety harnesses and anchor points for working at height on roofs or balconies.

Cleaning and Maintenance of Tools

- Clean tools immediately after use with Pro-Tool Surface Cleaner or a suitable solvent, following SDS guidelines.
- Remove primer, resin, sealer and catalyst residues before they cure to prevent damage.
- Inspect tools daily for wear and replace damaged items.
- Store tools in a dry, secure location to avoid contamination or corrosion.
- Dispose of cleaning waste in accordance with local regulations.

All tools must be used by trained operatives. For specialised or rented equipment, ensure operator certification.

DESIGN CONSIDERATIONS

Suitable Roof Types and Substrates

The Pro-BW® Plus system is designed for a variety of UK roofing applications, ensuring compliance with Building Regulations and standards.

- The Pro-BW® Plus system is suitable for a range of roof types, including limited access and pedestrian access roofs, including warm and cold exposed roofs, green roofs, protected roofs, inverted roofs, blue roofs (in combination with storm water attenuation systems), balconies, terraces, and walkways.
- Some surfaces may require priming or sacrificial layers to ensure proper adhesion.
- An independent electronic leak test is required for all inverted or buried systems prior to covering the waterproofing membrane.

Approved substrates must be structurally sound and comply with BS 6229:2018. Suitable options include:

- Concrete
- Screeds
- Timber
- Asphalt
- Bituminous felt
- Single-ply membranes

Unsuitable substrates: Lightweight insulating concrete, in-situ concrete <1850 kg/m³, friable or contaminated surfaces (require remediation). For high-moisture substrates, incorporate Cold Melt® DPM Primer. Always conduct adhesion tests to confirm suitability.

Falls and Drainage

Design falls to prevent ponding and ensure effective drainage.

- Ensure roofs have adequate falls to promote effective water runoff and prevent ponding.
- Install drainage outlets and gullies at low points, ensuring they are clear and compatible with the system.
- For blue roofs, integrate with storm water attenuation systems (outside the scope of this guide) to manage water retention.
- Verify drainage design with a structural engineer to avoid overloading.

Terraces and balconies must follow BS 8579:2020 for falls and drainage to prevent water ingress.

Loadings

Account for all loads to ensure system stability and longevity.

- Assess roof loadings, including dead loads (e.g., system weight) and live loads (e.g., maintenance access or pedestrian traffic).
- For pedestrian areas, consider additional loads and apply a skid-inhibiting finish (e.g., Pro-Aggregate EM) as needed.
- Consult a structural engineer if heavy equipment or blue/green roof loads are anticipated.

Detailing Requirements

Details must ensure watertightness and durability. Provide upstands of at least 150 mm above the finished surface at parapets, walls, and penetrations. Seal all joints, cracks, and transitions to prevent water ingress. Ensure drip edges and terminations are weatherproofed with appropriate detailing. For complex details (e.g., expansion joints) consult Proteus.

SUBSTRATE PREPARATION

Inspection and Repair

Effective substrate preparation is critical to ensure the Pro-BW® Plus system forms a durable waterproofing layer. Begin with a thorough inspection of the substrate to identify defects such as cracks, holes, or uneven surfaces. Repair these imperfections using appropriate materials - cementitious fillers for concrete, proprietary patching compounds for asphalt, or timber treatments

for wood - to create a stable and smooth base. All repairs must be fully cured and dry before proceeding with the waterproofing application.

Document all repairs and obtain approval if required under NHBC Standards or Building Regulations.

Cleaning Methods

Surfaces must be clean, dry, and free from contaminants to achieve proper adhesion. Contaminated substrates can lead to bond failure.

- The cleaning process depends on the substrate type. Use high-pressure power washer (2000 psi) or mechanical scrubbing to remove dirt, dust, and loose material from concrete and screeds
- For single-ply membranes, apply solvent cleaning to eliminate grease and debris.
- Ensure all surfaces are free from contaminants that could affect adhesion, and avoid leaving residues that might interfere with the curing process.

Adhere to COSHH regulations for any cleaning agents used.

Drying Requirements

Substrates must be visibly dry and free from dampness to prevent blistering or poor adhesion. High residual moisture can trap water vapour.

- After cleaning, allow the substrate to dry completely to prevent moisture-related adhesion issues.
- The surface should be dry to the touch with no standing water, typically requiring 24-48 hours depending on weather conditions and substrate porosity.
- Use forced drying in damp environments, and verify dryness with a moisture meter if necessary, especially for new concrete or timber.

If moisture persists, proceed to special cases below.

Special Cases

- **High Residual Moisture** ➡ Use Cold Melt® DPM Primer as a vapour barrier. Apply per its datasheet, allowing full cure before proceeding with next installation steps. This is essential for substrates like new concrete with trapped water.
- **Porous or Absorbent Surfaces** ➡ Increase primer coverage if needed and conduct adhesion tests.
- **Lightweight or Friable Substrates** ➡ Not suitable without reinforcement; consult Proteus for alternatives.
- **Green/Blue Roofs** ➡ Prepare for additional layers (e.g., protection fleeces); ensure substrate can support extra loads from soil or water.
- **Timber** ➡ should be free of rot and overlaid with Pro-Vapour Control/Carrier Membrane SA over Pro-Prime® SA.
- **Bituminous or damp surfaces** ➡ consult Proteus technical support for tailored solutions.

- **Independent electronic leak test** ➡ mandatory for all inverted or buried systems prior to covering the waterproofing membrane, to ensure system integrity.

Substrate-Specific Preparation

Asphalt

- Cleaning: Remove bulk contamination by scraping and sweeping, then power wash at 2000 psi.
- Repairs: Repair major cracks, blisters, or slumping with Fastfill (avoid heat or new asphalt; allow 28 days curing if used). Asphalt repairs are to be rectified with Fastfill.
- Pro-Prime® BW maybe required subject to asphalt/surface condition.

Bituminous Felt

- Cleaning: Scrape and sweep bulk contamination, power wash at 2000 psi, and allow to dry.
- Repairs: Remove badly cracked, degraded, or blistered areas to a sound edge. Replace with Pro-Vapour Control/Carrier Membrane SA adhered with Pro-Prime® SA.

Bituminous Coatings

- Cleaning: Remove loose, degraded, tacky, or mobile coatings.
- Adhesion Tests: Pro-Prime® Epoxy and Pro-Prime® BW are to be carried out before applying Pro-BW® Plus system.

Solar Reflective Coating

- Cleaning: Scrape and sweep bulk contamination, power wash at 2000 psi.
- Adhesion Tests: Pro-Prime® Epoxy and Pro-Prime® BW are to be carried out before applying Pro-BW® Plus system.

Concrete Substrates

- Cleaning: Remove laitance and friable concrete. Power wash at 2000 psi and allow to dry.
- Repairs: Rake out and repair cracks, gaps, and holes. Level hollows to a wood float finish. Repair cracks >5mm with Fastfill. Remove high spots by grinding or scabbling.
- Apply Pro-Prime® BW as stated in primer section before applying Pro-BW® Plus system.

Brick and Stone

- Cleaning: Abrade and sweep bulk contamination, power wash at 2000 psi, and allow to dry.
- Repairs: Repair spalling, flaking, or damage, and replace missing jointing.
- Apply Pro-Prime® BW as stated in primer section before applying Pro-BW® Plus system.

Single Ply Membranes and EPDM

- Cleaning: Remove bulk contamination, power wash at 2000 psi.
- Repairs: Cut out and repair blisters, ridges, or delaminated laps with Pro-Vapour Control/Carrier Membrane SA and Pro-Prime® SA.
- Adhesion Test: Pro-Vapour Control/Carrier Membrane SA and Pro-Prime® SA.

GRP (Glass Reinforced Plastic)

- Cleaning: Mechanically abrade loose or flaking materials, power wash at 2000 psi.
- Once dry, wipe over with Proteus Pro-Tool Surface Cleaner.

- Repairs: Overlay cracks and voids with Pro-Joint Tape SA (if subject to movement).
- Adhesion Tests: Pro-Prime® BW or Pro-Vapour Control/Carrier Membrane SA.
- Ensure the existing GRP trims are fully encapsulated with Pro-BW® Plus system

Metals (Lead, Aluminium, Zinc, Galvanised, Stainless Steel)

- Cleaning: Remove rust by wire brush or abrasion to bright metal, power wash.
- Once dry, clean metal surfaces down with Proteus Pro-Tool Surface Cleaner.
- Apply Pro-Metal Primer or Pro-Prime® Epoxy.

Paints/Coatings

- Cleaning: Remove loose or degraded coatings to a firm edge. Ensure remaining coatings are clean and grease-free.
- Apply Pro-Prime® Epoxy before applying Pro-BW® Plus system.

Existing Polyurethane Systems

- Cleaning: Remove bulk contamination, power wash at 2000 psi.
- Once surfaces are dry, wipe over existing polyurethane with Proteus Pro-Tool Surface Cleaner.
- Adhesion Tests: Pro-Prime® BW and Pro-BW® Plus system direct.

Roof Chippings/Stones

- Cleaning: Remove loose and embedded chippings by scabbling. Power wash at 2000 psi.
- Considerations when de-chipping a roof surface: Account for equipment weight and potential impact on internal decor.
- Apply Pro-Prime® BW before installing the Pro-BW® Plus system.

Timber Substrates

- Preparation: Clean surfaces before applying Pro-Prime® SA.
- Encapsulate all timber with Pro-Vapour Control/Carrier Membrane SA.
- Application: Apply membrane with a weighted roller for full bond, ensuring minimum 75mm laps for a watertight seal.

Cut Chases for Termination

- Preparation: Cut new chases to 15mm wide x 25mm deep before jet washing.
- Prime inside chases before applying Pro-BW® Plus system.

Always perform adhesion/bond tests (Section 8) after preparation to confirm readiness. Failure to prepare adequately may void guarantees and lead to system failure.

ADHESION/BOND TESTS

Procedure

Adhesion or bond tests are essential to verify the substrate's suitability and ensure strong bonding of the Pro-BW® Plus system. These tests must be performed after substrate preparation (Section 7) but before full priming and installation. The process simulates the system's application on a small scale.

Preparation

- Select a test area on the surface to be coated.
- Thoroughly clean an area approximately 300mm x 300mm.

- Wipe the sample area with Proteus Pro-Tool/Surface Cleaner and allow it to fully evaporate.

Priming

- Decant the required amount of Pro-Prime® BW and add the catalyst as specified.
- Apply the primer to half of the sample area.
- Allow the Pro-Prime® BW to fully cure according to product instructions.

Application of Membrane

- Decant the Pro-BW® Plus Resin and add the catalyst at the required rate.
- Apply the Pro-BW® Plus Resin by roller over the entire sample area.
- Embed a cut-to-size piece of Pro-Force 450 into the Pro-BW® Plus Resin.
- Fully consolidate the Pro-Force 450 with additional Pro-BW® Plus Resin to ensure saturation.

Documentation

- Take a sketch, photo, or clearly mark around the sample to record the preparation methods.

Assessment

- Return to the sample after 7 days.
- Use a Stanley knife (or similar sharp tool) to attempt to dislodge the membrane from the surface and evaluate the adhesion level

Acceptance Criteria

- **Satisfactory Adhesion** ➡ The compound resists peeling, shows cohesive failure (e.g., tearing within the material rather than at the interface), or requires significant force to separate. This indicates the substrate is ready.
- **Unsatisfactory Adhesion** ➡ If the patch peels easily with minimal resistance or delaminates at the substrate interface, the surface is not suitable. Common causes include residual moisture, laitance, contaminants, or insufficient priming.

Troubleshooting

- Re-clean and dry the area if contamination is suspected.
- For high moisture, apply Cold Melt® DPM Primer first and re-test.
- Adjust primer coverage or drying time; re-prime and test again.
- If failures persist, consult Proteus for substrate remediation (e.g., mechanical abrasion or alternative primers).
- Protect successful test patches until main installation; the system will bond monolithically with new material.

Frequency

Bond tests are mandatory for all projects, including roofs, balconies, terraces, walkways, and specialised applications like green or blue roofs. Conduct at least one test per substrate type or area, with additional tests for variable conditions (e.g., different concrete batches or weather changes). For large projects (>500 m²), test every 100 m² or daily. Record results (e.g., photos, notes on resistance) for quality assurance and guarantee purposes. An independent electronic leak test is also required for inverted or buried systems prior to covering the membrane.

Failure to perform or pass these tests may result in system failure and voided guarantees. Always use fresh materials for tests to match installation conditions.

CATALYST AND ACCELERATOR

Below is a breakdown of relevant system components which require and/or can use catalyst and/or accelerator.

Catalyst

Product	Pro-BW® Catalyst scoops/L @ 3-10°C	Pro-BW® Catalyst scoops/L @ 11-20°C	Pro-BW® Catalyst scoops/L @ 21-30°C
Pro-Prime® BW	4	3	2
Pro-BW® Plus Resin	4	3	2
Pro-BW® Plus Sealer	4	3	2

Accelerator

Product	Accelerator	Mix ratio *** amount of accelerator : amount of primer/resin
Pro-Prime® BW	Pro-Prime® BW Accelerator *	1:10
Pro-BW® Plus Resin	Pro-BW® Plus Resin Accelerator **	1:10
Pro-BW® Plus Sealer	**Do not use**	

Accelerator should be used in temperature range 1-3°C
* One Pro-Prime® BW Accelerator unit (0.5 L) is designed to be added to one Pro-Prime® BW unit (5L)
** One Pro-BW® Plus Resin Accelerator unit (1 L) is designed to be added to one Pro-BW® Plus Resin unit (10L)
*** If partial mix is required, 1:10 ratio of accelerator to primer/resin should be maintained

PRIMER

Primer | Application

Priming enhances adhesion, seals porous surfaces, and optimises the performance of the Pro-BW® Plus system. Use the appropriate primer - such as Pro-Prime® BW for bituminous and wood substrates, Pro-Prime® Epoxy for metal or concrete, or Pro-Prime® Metal for metal details - after adhesion testing and substrate preparation.

- Apply the primer to the prepared, dry substrate using a brush or roller, ensuring even coverage without pooling or runs.
- Work in sections to maintain consistency and avoid drying issues; apply in an uniform layer.
- For vertical surfaces (e.g., upstands), use a brush to prevent drips and ensure thorough coverage.
- Tools: Use solvent-resistant brushes or rollers as listed in Section 5; clean immediately after use with Pro-Tool Surface Cleaner or a suitable solvent, following SDS guidelines.

Priming must cover all areas to receive waterproofing, including details like outlets and penetrations.

Primer | Coverage Rate

Refer to table below for minimum application rates of various primer types.

Substrate	Adhesion Test	Primer	Unit Size	Minimum Coverage Rate amount/m²	Maximum Coverage per Unit m²/unit	Application Temperature
Exposed Aged Asphalt	No	Pro-Prime® BW	5 L	0.2	25	≥ 3°C
Coated Asphalt	Yes	Pro-Prime® BW	5 L	0.2	25	≥ 3°C
Coated Asphalt	Yes	Pro-Prime® Epoxy	5 L 15 L	0.2	25 75	≥ 3°C
Concrete Aged	No	Pro-Prime® BW	5 L	0.2	25	≥ 3°C
Green Concrete or Concrete laid within 28 days	Yes	Cold Melt® DPM Primer	5 kg 10 kg	0.4	12.5 25	≥ 5°C
New Concrete Cured	Yes	Pro-Prime® BW	5 L	0.2	25	≥ 3°C
Porous/Dry Surfaces	Yes	Pro-Prime® BW	5 L	0.2	25	≥ 3°C

Pro-BW® Accelerator can be added to the Pro-Prime® BW to allow temperature application at ≥ 1°C
All coverage rates in the above table are minimum coverage rates and do not allow for wastage.

- **Coverage rate** ➡ Adjust based on absorption - porous concrete may require more, while smoother surfaces like metal might need less.
- **Variations** ➡ Increase for absorbent or rough substrates (e.g., asphalt or repaired concrete); test small areas to determine the correct rate.
- **Tools** ➡ Use those specified in Section 5; measure coverage with marked containers to ensure consistency.
- **Waste minimisation** ➡ Mix only the required amount; dispose of excess per waste regulations.

Inspect primed surfaces for missed spots before proceeding to resin application. Poor priming can lead to bond failure and may void guarantees. For further details on application of specific primers, always refer to their dedicated Data Sheets.

Primer | Drying Times and Conditions

- **Standard drying time** ➡ 20-30 minutes at 20°C, depending on ambient temperature (ideally 3-30°C with accelerator for lower temperatures), humidity, ventilation, and substrate porosity. Do not proceed until the primer is tack-free and fully cured.
- **Environmental factors** ➡ Avoid application in rain, fog, or high humidity (>80%), as this can delay curing or cause defects. In cooler weather (below 10°C), use Pro-Prime® BW Accelerator and allow extra time if required; monitor with touch tests.
- Do not force-dry with heat sources, as this can affect adhesion or curing properties.
- Re-prime any areas contaminated or left overnight to ensure a continuous bond.

BASE COAT | DETAILING

Detailing ensures that Pro-BW® Plus system provides continuous waterproofing at transitions, penetrations, and edges, preventing water ingress and maintaining structural integrity.

All details must incorporate Pro-Force 450 reinforcement, applied over primed surfaces after successful adhesion tests (Section 8).

General procedure for reinforced details

- Prepare the required sizes/lengths of Pro-Force 450 for each detail. Tear the reinforcement to give a feathered edge. Set the prepared Pro-Force 450 aside until required.
- Apply Pro-BW® Plus Resin by brush or mini roller at a minimum of 1.5 L/m² onto the desired detail.
- Place the pre-cut Pro-Force 450 into the wet Pro-BW® Plus Resin. Saturate the Pro-Force 450 by brush or mini roller into the wet Pro-BW® Plus Resin. Ensure a minimum overlap of 75 mm to end and side laps of the Pro-Force 450 during embedment application.
- Leave for 5-10 minutes to allow the matting to break down. Once the matting has broken down, form the Pro-Force 450 into the desired detail until completely encapsulated with the Pro-BW® Plus Resin.
- The embedded details must be left to cure for a minimum of 1 hour before top coat can be applied.

Expansion Joints

- Consult Proteus for bespoke guidance.

Terminations

Chases

- Cut out all new chases ensuring that the new chase is 15mm wide and 25mm deep.
- All chases must be cleaned, dust free and fully primed with Pro-Prime® BW prior to coating.
- Dress the Pro-BW® Plus Base and Top Coat into the prepared chase.
- Seal the chase with Proteus Sealant or a sand and cement pointing once the coating has fully cured.

Lead Flashings

- Pull existing or new lead flashings up to allow Pro-BW® Plus application.
- Dress the Pro-BW® Plus up the upstand by a minimum of 150mm under the lead flashing.
- Once Pro-BW® Plus is fully cured, dress down the lead flashings.

Termination Bars

- Bed a termination bar into Proteus Sealant and mechanically fix the bar at 300mm centres.
- Finish off with a bead of Proteus Sealant to achieve a completed seal.

Render Stops | Coping Stones

- Dress the Pro-BW® Plus up to the underside of the render stop bead or coping stone overhang.
- Once Pro-BW® Plus is fully cured, seal off with a bead of Proteus Sealant.

Window Cills | Door Thresholds

- Apply Pro-BW® Plus to the underside the window cill or door threshold.
- Ensure the Pro-BW® Plus is applied to a minimum height of 150mm above the finished floor level and seal with Proteus Sealant.

Pipes and Penetrations

- Apply the Pro-BW® Plus to pipes and penetrations by a minimum of 150mm above the finished floor level.
- Once Pro-BW® Plus is fully cured, install a stainless-steel jubilee clip around the collar of the Pro-BW® Plus finished edge.

Eve & Pitched Roof Tiles

- Remove bottom tile courses and set tiles aside to allow any lay-board extension to achieve the required height.
- Any new timber extension will require a Pro-Vapour Control/Carrier Membrane SA overlay over Pro-Prime® SA primer.
- Apply Pro-BW® Plus and when fully cured, reinstate the tiles to cover the Pro-BW® Plus applied.

Rainwater Outlets

- Remove all leaf guards/clamping rings located in/over the outlet.
- Prime if required and dress the Pro-BW® Plus into the outlet.
- Once fully cured test outlets for blockages and reinstate the clamping ring and/or leaf guard.

Perimeter Edge Trims

- Fix a new Proteus Edge Trim of a required depth to the perimeter edge.
- The trims are to be mechanically fixed with screws at 300mm centres.
- A trim insert is to be place behind the trim between each section joint.
- The Pro-BW® Plus is to be terminated tightly into the top lip of the trim.
- Once fully cured, seal off with Proteus Sealant.

Perimeter Drip Trim

- Fix a new Proteus Drip Trim of a required depth to the perimeter edge.
- The trims are to be mechanically fixed with screws at 300mm centres.
- Apply Pro-BW® Plus to the roof area and fully encapsulate the trim, terminating tightly at the bottom of the drip edge.

Bespoke details

- Consult Proteus for bespoke guidance.

BASE COAT | FLAT AREAS

Base Coat | Application

The Pro-BW® Plus Resin must be prepared correctly to ensure proper curing, adhesion, and system performance. Use a mechanical mixer or agitator designed for liquid resin applications, suitable for cold-applied systems.

- Roll off full lengths of Pro-Force 450 for the flat areas of the roof – these can be pre-measured. Set the Pro-Force 450 aside until it is required.
- Position the mixing equipment on a stable, level surface away from flammable materials, traffic, and edges, complying with working at height regulations.
- Load Pro-BW® Plus Resin and add Pro-BW® Catalyst gradually to avoid uneven mixing; stir at low speed (300-500 RPM) for 2-3 minutes until fully blended.
- Maintain a working temperature between 5°C and 35°C (use Pro-BW® Plus Resin Accelerator for temperatures as low as 1°C); monitor with a thermometer if ambient conditions are near limits. Avoid overheating, which can affect curing.
- Allow 5-10 minutes for initial mixing and activation, depending on batch size and temperature.
- Apply base coat of Pro-BW® Plus Resin with a 9 or 12 inch medium pile roller
- Place the pre-rolled Pro-Force 450 into the wet Pro-BW® Plus Resin, saturate the reinforcement with the medium pile roller into the wet resin. Ensure a minimum overlap of 75mm to end and side laps.
- Leave for 5-10 minutes to allow the matting to break down. Once the matting has broken down, embed the Pro-Force 450 until completely encapsulated in the base coat.
- The embedded flat area must be left to cure before top coat can be applied.

Snagging

Before applying the top coat check and rectify:

- **Pinholes** ➡ Fill with Proteus Sealant and allow sealant to fully cure.
- **Wicking fibres** ➡ Cut/sand off wicking fibres and remove any dust/debris.
- **Tenting/Voids** ➡ Cut out and re-apply base coat and reinforcement and allow to fully cure.
- **Insufficient base coat** ➡ Ensure all areas of embedment which are below the required coverage rate are applied with additional Pro-BW® Plus Resin to achieve the required coverage rate.
- Document snags with photos and resolve within 24 hours; if extensive, consult Proteus to avoid compromising durability. All snagging areas should be wiped over with Pro-Surface Cleaner before additional Pro-BW® Plus is applied.

Base Coat | Coverage Rate

Refer to table below for minimum application rates of the base coat, to achieve compliance with the Proteus Guarantee.

Substrate	Base coat L/m²
Mineral Felt De-Chipped/Scabbled Surfaces Porous Brickwork	2
Exposed Asphalt Coated Asphalt Felt & Stable Bitumen Solar Reflective Paint Brittle Bitumen	1.5

Substrate	Base coat L/m²
Concrete Aged Concrete New/Damp Damp Brickwork Metal Lead Aluminium Stainless Steel Galvanised Pro-Vapour Control/Carrier Membrane SA PVC Membranes EPDM Membrane Other Single-ply Membranes GRP Existing Roof Coatings	

All coverage rates in the above table are minimum coverage rates and do not allow for wastage.

Base Coat | Drying Times and Conditions

- **Standard curing time** ➡ ~45 minutes at 20°C, depending on ambient temperature (ideally 3-30°C with accelerator for lower temperatures), humidity, ventilation, and layer thickness. Do not proceed until the base coat is tack-free and fully cured to ensure proper embedding of Pro-Force 450 reinforcement.
- **Environmental factors** ➡ Avoid application in rain, fog, or high humidity (>80%), as this can delay curing or cause defects. In cooler weather (below 3°C), use Pro-BW® Plus Resin Accelerator and allow extra time; monitor with touch tests.
- Do not force-dry with heat sources, as this can affect adhesion or curing properties.
- Re-apply base coat to any areas contaminated or left overnight to ensure a continuous bond.

TOP COAT | FLAT AREAS

Top coat | Application

Apply the Pro-BW® Plus Resin top coat to flat areas once the base coat with embedded Pro-Force 450 reinforcement has fully cured.

- Mix Pro-BW® Plus Resin with Pro-BW® Catalyst (and optional pigment) for colour matching; stir at low speed (300-500 RPM) for 2-3 minutes until uniform.
- Apply the mixed resin to the designated areas using a medium-pile roller or squeegee, ensuring even coverage without puddles.
- Work in sections of 5-10 m² to manage curing time, applying in one direction for uniform thickness; avoid overworking the material once it begins to gel.
- Ensure all flat areas, including around penetrations and drains, are fully covered without puddles or thin spots; feather edges to adjacent cured areas for continuity.

Snagging

After application, inspect the top coat for defects to maintain system integrity. Snagging should occur immediately after curing but before handover.

- **Pinholes, bubbles, or fish eyes** ➡ inspect using a bright light or wet sponge test; repair defects by spot-applying mixed resin and feathering with a squeegee.
- **Missed areas or uneven thickness** ➡ apply a thin touch-up coat to blend seamlessly; avoid sanding cured areas to prevent fibre exposure.
- Document snags with photos and resolve within 24 hours; if extensive, consult Proteus to avoid compromising durability.

Top coat | Coverage Rate

Apply Pro-BW® Plus Resin at a minimum of **0.5 L/m²** to all cured base coat areas and allow to cure.

Top coat | Drying Times and Conditions

- **Standard curing time** ➡ ~30 minutes at 20°C to become showerproof, with full cure in 1-2 hours, depending on ambient temperature (ideally 3-30°C with accelerator for lower temperatures), humidity, ventilation, and layer thickness. Do not proceed to foot traffic or covering until the top coat is tack-free and fully cured.
- **Environmental factors** ➡ Avoid application in rain, fog, or high humidity (>80%), as this can delay curing or cause defects. In cooler weather (below 3°C), use Pro-BW® Plus Resin Accelerator and allow extra time; monitor with touch tests.
- Do not force-dry with heat sources, as this can affect adhesion or curing properties.
- Re-apply top coat to any areas contaminated or left overnight to ensure a continuous bond.

SKID-INHIBITING FINISH

The skid-inhibiting finish is applied to trafficked areas such as walkways, balconies, and terraces to provide slip resistance. It consists of a resin coat broadcast with Pro-Aggregate EM aggregate, followed by a sealer coat. This finish must be applied over a fully cured top coat of Pro-BW® Plus Resin.

Skid-Inhibiting Finish | Application

Aggregate

- Mask adjacent non-trafficked areas with tape before starting to ensure clean edges.
- Mix Pro-BW® Plus Resin with Pro-BW® Catalyst (and optional pigment); stir at low speed (300-500 RPM) for 2-3 minutes until uniform.
- Apply the mixed resin to the designated trafficked areas using a medium-pile roller or squeegee, ensuring even coverage without puddles.
- While the resin is still wet, fully broadcast Pro-Aggregate EM at 2-3 kg/m², distributing evenly by hand or mechanical spreader for full embedment.
- Remove the masking tape whilst resin is still wet.
- Allow the coat to cure fully (~30 minutes at 20°C to become showerproof; 1-2 hours for full cure), depending on temperature and humidity.

- Once cured, gently sweep or vacuum away all excess and loose aggregate to achieve a uniform surface. Recovered aggregate can be reused on other areas.

Sealer

- Mask application areas with tape before starting to ensure clean edges.
- Mix Pro-BW® Plus Sealer with Pro-BW® Catalyst (and optional pigment); stir at low speed (300-500 RPM) for 2-3 minutes until uniform.
- Apply the mixed sealer over the cured Pro-Aggregate EM areas using a medium-pile roller, ensuring full encapsulation of the aggregate without disturbing it.
- Work in sections to maintain a wet edge and avoid lap marks.
- Remove the masking tape whilst sealer is still wet.
- Allow the sealer to cure fully (~30 minutes at 20°C to become showerproof; 1-2 hours for full cure), depending on temperature and humidity.

Snagging

- **Uneven aggregate distribution, loose particles, or exposed resin** ➡ repair by rebroadcasting Pro-Aggregate EM into a spot-applied resin coat and resealing.
- **Missed areas or uneven thickness** ➡ address thin sealer spots, by applying a thin touch-up coat of Pro-BW® Plus Sealer and blending seamlessly with a roller; avoid over-application to prevent pooling.
- **Aggregate embedment, and overall texture** ➡ vacuum or gently sweep loose aggregate and confirm no tape residue remains from masking.
- Document snags with photos and resolve within 24 hours; if extensive, consult Proteus to avoid compromising durability.

QUALITY CONTROL AND INSPECTION

Quality control is vital to verify that the Pro-BW® Plus system has been installed correctly. Regular inspections ensure sufficient adhesion, uniformity, and curing, minimising defects and supporting guarantee eligibility. All checks must be documented, with photographs and measurements retained for project records.

Site checks

Conduct ongoing site checks throughout installation to maintain standards and address issues promptly. These should be performed by the site supervisor or a qualified operative at key stages.

- Verify substrate preparation and priming for cleanliness and dryness before proceeding.
- Confirm mixing ratios and application rates.
- Inspect base coat for full saturation and embedding of Pro-Force 450 reinforcement, ensuring no dry spots or wrinkles.
- Check top coat and sealer for even thickness, colour consistency (if pigmented), and absence of pinholes or bubbles.
- For anti-skid finishes, measure aggregate broadcast rate to achieve required slip resistance post-cure.
- Ensure details (e.g., upstands, penetrations) are fully encapsulated.

Integrity testing

Integrity testing confirms the waterproofing layer's continuity and is mandatory for all inverted or buried systems before covering.

- Perform an independent electronic leak test using low-voltage equipment on completed membranes.
- Test at operating pressure across the entire area, marking any pinholes for immediate repair with additional resin and reinforcement.
- Re-test repaired areas to verify integrity before backfilling or overlaying.
- For green or blue roofs, integrate testing with attenuation system checks (outside the scope of this guide; consult engineer).

End-of-day and final inspections

End-of-day inspections prevent overnight issues, while final inspections ensure handover compliance.

- **At end-of-day** ➡ Confirm all applied areas are cured, protected from weather/traffic with temporary covers if needed, and free from contamination.
- **Final inspection** ➡ Walk the completed system with the client or specifier, checking for defects, uniform appearance, and compliance with design drawings. Use a checklist covering thickness, reinforcement coverage, and detailing.
- Snag and rectify minor issues (e.g., thin spots) within 48 hours; major defects require Proteus' approval.
- Issue a completion certificate only after passing integrity tests and all checks.

Record-keeping

Maintain comprehensive records to support quality assurance, audits, and guarantees.

- Log daily activities, including weather conditions, batch numbers, mixing ratios, coverage rates, and test results.
- Store digital/photographic evidence of key stages (e.g., pre-application substrate, cured membrane) in a project folder.
- Retain material delivery notes, SDSs, and calibration certificates for tools.
- Submit records to Proteus for guarantee validation.

MAINTENANCE AND REPAIR

Regular maintenance preserves the performance and longevity of the Pro-BW® Plus system, ensuring compliance and supporting guarantee claims. The system is designed for low maintenance, with UV and weathering resistance, but periodic checks help identify issues early. Always consult Proteus before major repairs to avoid voiding guarantees.

Inspection schedule

- Conduct visual inspections annually for non-trafficked roofs (e.g., warm or cold decks) and bi-annually for trafficked areas (e.g., balconies or walkways) or exposed sites.

- Schedule additional checks after extreme weather events (e.g., storms) or every 5 years for a full professional assessment, including slip resistance testing.
- For inverted or buried systems, inspect accessible edges and penetrations annually; an independent electronic leak test is recommended every 5-10 years.

Inspection scope

- Surface integrity for cracks, blisters, or delamination; probe gently with a blunt tool to assess adhesion.
- Ponding or debris accumulation, especially around outlets and details.
- Fading or chalking on pigmented top coats; check for aggregate loss in anti-skid finishes.
- Vegetation growth (e.g., moss or algae) on exposed areas; test for root penetration in green roofs.
- Joints and terminations for movement or water staining; verify upstands remain at least 150 mm high.

Cleaning and clearance

- Remove leaves, dirt, and debris quarterly using a soft broom or low-pressure water jet (maximum 50 bar) to avoid surface damage; ensure drains and gullies are clear to prevent ponding.
- For moss or algae, apply a proprietary anti-fungicidal solution (diluted per manufacturer instructions) and rinse after 24 hours; avoid abrasive cleaners that could erode the membrane.
- Clean trafficked areas with mild detergent and water monthly, using a soft brush; do not use steam cleaners or solvents, as they may affect curing properties.
- Dispose of waste responsibly, preventing runoff into drains; for blue roofs, coordinate cleaning with attenuation system maintenance (outside the scope of this guide).

Repair procedures

- For minor defects (e.g., pinholes or small cracks <50 mm), clean the area, abrade lightly with 80-grit sandpaper, and apply a spot coat of mixed Pro-BW® Plus Resin (0.5 L/m²) with Pro-BW® Catalyst; feather edges and overcoat with sealer if trafficked.
- For larger damage (e.g., blisters or tears >50 mm), cut out the affected area in a square (minimum 150 mm sides), remove loose material, prime with Pro-Prime® BW, and re-apply base coat with Pro-Force 450 reinforcement (75 mm overlaps), followed by top coat.
- Always match existing colour with Pro-BW® Resin Pigment; test adhesion on a small area first. For extensive repairs (>1 m²), contact Proteus for a site visit and materials specification.

Special maintenance for green/blue roofs

- Green roofs ➡ Inspect quarterly for root intrusion; apply root-resistant additives during repairs if needed. Trim vegetation to prevent shading that could trap moisture, and ensure drainage layers remain functional.
- Blue roofs ➡ Annually check attenuation components (e.g., restrictors) for blockages; test membrane integrity post-flooding with a low-voltage wet leak detection method. Avoid heavy foot traffic during retention periods.

- In both cases, use low-impact cleaning to protect ecology; consult a specialist engineer for load assessments after prolonged saturation.

GUARANTEES

The Pro-BW® Plus system is backed by guarantees from Proteus Waterproofing Limited, providing assurance of quality and performance when installed correctly. These guarantees are subject to terms and conditions, and compliance with this Application Guide, the BBA Agrément Certificate 22/6183, and relevant UK standards (e.g., BS 8217:2005 and BS 6229:2018). Guarantees are issued upon project completion and inspection.

Proteus Waterproofing Guarantee Details

- Coverage ➡ Independent Pre-Paid Insurance Backed Guarantees are available covering materials and labour, subject to the current terms and conditions of the guarantees which are available separately upon request.
- Duration ➡ Varies by project specifics (e.g., roof type, application); standard guarantees range from 15 to 35 years, depending on the specification and maintenance regime. For green, blue, or inverted roofs, guarantees may include root resistance or attenuation-related clauses.
- Process ➡ Apply via Proteus upon submission of installation records, including adhesion tests, quality inspections, and as-built drawings. A final site audit will be required.

Installation by Approved Contractors

- Guarantees are only valid when installed by Proteus-approved contractors, trained in Pro-BW® Plus system.
- Approval ensures adherence to best practices; unapproved work voids coverage.
- For NHBC-compliant projects, use registered installers to meet Chapter 7.1 requirements.

Proteus offers training and certification - enquire for details. Always verify contractor status to secure guarantee eligibility.

REFERENCES

This section lists key resources, standards, and contact details referenced throughout the Pro-BW® Plus Application Guide. These ensure compliance with building regulations, best practices, and system certification. Contractors must familiarise themselves with these documents, as Proteus accepts no responsibility for misinterpretation or lack of knowledge by third parties. All works should align with the specified requirements.

Relevant Standards and Codes

The system and installation must conform to the following British Standards and industry guidelines:

- **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.
- **BS EN 636:2012** – Plywood – Specifications (for timber substrates).
- **BS EN 1991-1-4:2005** (including UK National Annex) – Actions on structures – General actions – Wind actions.
- **BS 8579:2020** – Guide to the design of balconies and terraces.
- **LRWA Design Guide for Specifiers** – Liquid Roofing and Waterproofing Association guidance for flat roof design.
- **S2T (Safe2Torch)** – NFRC guidelines for safe hot works in torch-on roofing.
- **GRO Code of Best Practice** – Green Roof Organisation standards for green roofs and roof gardens.
- **NHBC Standards, Chapter 7.1** – Flat roofs, terraces, and balconies (note: not applicable for refurbishments).
- **EN 13707:2013** – Flexible sheets for waterproofing – Reinforced bitumen sheets for roof waterproofing – Definitions and characteristics.
- **EN 13948** – Flexible sheets for waterproofing – Bitumen, plastic and rubber sheets for roof waterproofing – Determination of resistance to root penetration (for Anti-Root Capsheet).
- **NFRC Technical Guidance Note for Blue Roofs** – Construction and design of roofs and podiums with controlled temporary water attenuation.

Additional references include UK Building Regulations (e.g., Part B for fire, Part C for moisture), the Construction (Design and Management) Regulations 2015, and COSHH Regulations 2002.

BBA Certificate

- **Pro-BW® Plus BBA Agrément Certificate 22/6183** – Issued by the British Board of Agrément, confirming the system's suitability for weathertightness, fire performance, durability, and compliance with regulations.

Standard Details

- Pro-BW® Plus Warm Roof
- Pro-BW® Plus Inverted Roof
- Pro-BW® Plus Overlay

Data Sheets

- Pro-BW® Plus Data Sheets

Safety Data Sheets

- Pro-BW® Plus Safety Data Sheets

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