BRITANNIA

# POLYSHIELD

BBA APPROVAL INSPECTION TESTING CERTIFICATION
CERTIFICATE 13/5042

## BUILT-UP WATERPROOFING SYSTEM

# RUBBER-BASED TOP COAT/BASE COAT DEMONSTRATING OUTSTANDING CHARACTERISTICS, SMOOTH

***Waterproofs roofs instantly – and keeps them waterproof for years to come***

**Polyshield is a single pack, cold applied, rubber-based waterproofing coating for use as part of a reinforced built-up system. In conjunction with Polyshield Scrim it forms a fully-adhered, monolithic single-ply membrane for larger, all-over roofs where greater life expectancy is needed.**

## PERFORMANCE ADVANTAGES

- **Exceptional durability and performance of fifteen years**
- **Cold applied - no hot works on roof**
- **Unrivalled life cycle cost savings**
- **Works instantly**
- **A two-coat system developed for larger-all-over roofs where greater life expectancy is needed**
- **Flexible, highly elastic solvent-based single pack coating with excellent adhesion to almost any wall or roof substrate**
- **Rainfall immediately after application has no adverse effect**
- **Excellent UV and resistance to movement of the substrate**
- **Fast curing, can be applied at low temperatures**

## ENVIRONMENTAL IMPACT

- Cold applied liquid roofing membranes have been recognised to help roofing elements achieve up to a BREEAM A+ rating (depending on the roof construction), demonstrating the sustainability and low environmental impact of this chemistry type.

COLD APPLIED LIQUIDS FOR ROOF CONSTRUCTIONS A+

## USES

- **A built-up roof system for overlaying existing warm or cold roofs.**
- Flat Roofs, Pitched Roofs, Weathered Asphalt and Bituminous Surfaces, Concrete, Brickwork, Fibreglass and GRP, Felted Surfaces, Asbestos Cladding, Sheeting, Metal (Galvanised, Ferrous and Non-Ferrous), and Old Lead, Previously Painted Surfaces* and Weathered Single-Ply membranes including EPDM* PVC*, HYPALON*, TPO ROOF MEMBRANES* and PLASTISOL COATED SUBSTRATES*.
  *Adhesion/pull off test required.
- Can be brush or roller (solvent resistant) applied.
- **Not for use on Walkways, Balconies, tanking, fish and aquatic ponds, new lead, slate or internal use.**
- **We do not guarantee on part roof repairs and stand alone gutters.**

## APPROVED CONTRACTORS

- Installing contractor must be fully trained in the use of the Polyshield system.

## TESTS

**Approvals/Standards:**

- External fire performance; BS 476-Part 3:2004 EXT.F.AC.
- British Board of Agrément (BBA) Certificate:13/5042.

MADE IN BRITAIN

## COLOUR RANGE

> **Basecoat:** Light Grey.
> **Topcoat:** Dark Grey.

## BASECOAT/TOPCOAT PACK SIZE

> 5 and 20 litre containers.

## SCRIM AVAILABILITY

**Standard Rolls (width x length):**
> 1m x 100m , 0.5m x 100m
> 1m x 33m , 0.2m x 50m
> 0.1m x 50m rolls of scrim available

## SUBSTRATE QUALITY

**Cementitious substrates**
New concrete should be cured for at least 28 days* and should have a pull off strength 1.5 N/mm2. Inspect the concrete, including upstands, all areas should be hammer tested. Concrete must be suitably finished, preferably by wood float or steel pan. A power float finish is acceptable where the surface is prepared to avoid laitance (a tamped finish is not acceptable). The surface finish must be uniform and free from defects such as laitance, voids or honeycombing. The substrate must be of a suitable quality and condition to receive the system. Please refer to our Technical Department for further details.

**Brick and stone**
Bricks, blocks and mortar joints must be sound and preferably flush pointed.

**Slates, tiles, etc.**
Ensure all slates/tiles are sound and securely fastened, replacing obviously broken or missing sections

**Asphalt**
Asphalt contains volatiles which can cause bleeding and slight non-detrimental staining. The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out

**Bituminous felt**
Ensure that bituminous felt is firmly adhered or mechanically fixed to the substrate. Bituminous felt should not contain any badly degraded areas.

**Single ply**
Single ply membranes must be correctly laid and securely fixed/adhered. Badly cracked or brittle membranes should be removed.

**Bituminous coatings**
Bituminous coatings should not have sticky or mobile surfaces, volatile mastic coatings, or old coal tar coatings.

**Metals**
Metals must be in sound condition

**Timber substrates**
Timber and timber based panel roof decks are to be well constructed, in good condition, firmly adhered, and with sufficient fixings for the nature and location of the site

**Paints/Coatings**
Ensure the existing material is sound and firmly adhered.

## CLEANING OF SUBSTRATE

> Clean the surface with a powerwash of up to 2,000 psi, depending on the substrate
> If needed clean the area with Britannia Fungicidal Wash. This eliminates all moss/algae. The wash must be applied and left on the substrate for 7 days, then washed off prior to the application.
> The substrate must be dried off using squeegees/rags. Gas guns should not be used.
> Once the substrate is clean and dry you can then begin the application.

## REPAIRS TO SUBSTRATE

**Including splits, cracks, joints, seals and crazed areas.**
> Repair faults in the surface by using a high quality waterproof mastic/filler.
> Apply Polyshield system to repaired areas incorporating Britannia Reinforcing Scrim overlapping by 5cm.

## GENERAL INSTALLATION

> Installation must not be carried out during inclement weather (eg rain, fog or snow). When the temperature is below 5°C, suitable precautions against surface condensation on the substrate must be taken.

> Substrates to which the system is to be applied must be sound, dry, clean and free from sharp projections such as nail heads and concrete nibs. Britannia's advice should be sought for suitable cleaning procedures and the use of a proprietary surface cleaner/fungicidal wash.

> Previously coated areas must be checked for integrity and adequate adhesion to the substrate. Defects such as cracks and blisters must be repaired prior to application of the system in accordance with Britannia's instructions.

> Adhesion checks should be carried out to ensure that the system is compatible with the existing surfaces and to determine the necessity for a primer.

> Expansion or construction joints must be additionally reinforced prior to the application of the main waterproofing layer in accordance with Britannia's instructions.

> Detailing, such as at upstands and penetrations, must be carried out in accordance with Britannia's instructions.

> **It is the contractors responsibility to inspect each section of the application to ensure the correct measures and steps outlined in this specification ducument are applied**.

## PRIMING

**ALL ROOF SUBSTRATES REQUIRE PRIMING PRIOR TO OVERCOATING WITH THE POLYSHIELD REINFORCED WATERPROOFING SYSTEM.**

These surfaces should be cleaned prior to applying Polyshield Reinforced Waterproofing System.

**See Primer Guide for the following substrates:**

**Highly porous/friable surfaces**
Felted surfaces, Concrete and asbestos cladding, and sheeting should be primed with Britannia Polyshield Primer (see separate technical data sheet).

**Fibrous concrete corrugated sheeting: two coats of Britannia Polyshield Primer must always be applied to this substrate.**

**Concrete and masonry**
Prime with Britannia Polyshield Primer.

**OSB/Plywood and Wooden Substrates**
OSB/Plywood, wooden substrates and insulation board must be treated with a 50mm wide strip of Britannia Tape (any other tape must be adhesion tested before use). A continuous surface should be created before commencing with the application of Britannia Polyshield Primer (see separate technical data sheet).

**Weathered Single-Ply Membranes***
**EPDM, PVC, HYPALON, TPO ROOF MEMBRANES and PLASTISOL COATED SUBSTRATES**
See Priming Chart on Page 5.

**IT IS GOOD PRACTICE TO INSPECT AND CARRY OUT ADHESION TESTS ON THE SINGLE PLY MEMBRANES INCORPORATING PRIMER, DURASHIELD REINFORCED WATERPROOFING SYSTEM. BEFORE STARTING WORK PLEASE SEE THE SEPARATE ADHESION TEST DOCUMENT ON OUR WEBSITE.**

**Weathered asphalt and Bituminous surfaces**
Prime with Britannia Polyshield Primer.

*Note: discolouration may occur over a new asphalt, tar or bitumen surface. An extra coat may therefore be required for decorative purposes only. Aged bitumen can be liable to crack, therefore further advice should be taken.*

**Metal**
All ferrous metals should be primed with Britannia Metal Primer (see separate technical data sheet).

**Lead**
No primer required on old lead, sheet/valleys.
**DO NOT USE ON NEW LEAD**.

**Aluminium and Copper**
Both of these should be primed with Britannia Two-Pack Self-Etching Primer (see separate technical data sheet).

**Previously painted or coated substrates***
Prime with Britannia Polyshield Primer.

**IT IS GOOD PRACTICE TO INSPECT AND CARRY OUT ADHESION TESTS ON ANY EXISTING COATING OR SUBSTRATE PRIOR TO APPLICATION OF THE COATING**.

*Adhesion/pull off test required.

## SCRIM RECOMMENDATION

- **Apply Reinforcing Scrim to all areas which can be ponded.**
- **Reinforcing Scrim must be used on all upstands, curves, skylight bases and rainwater outlets.**
- **Reinforcing Scrim to be used on all gutter expansion joints.**
- **Reinforcing Scrim to be used on all repaired areas.**

**Fibrous corrugated concrete sheeting and skylight surrounds**
- Apply to both horizontal and vertical laps including around ALL fixings. Before starting, carefully tighten any fixings that may be loose.
- When reinforcing the horizontal laps, ensure the reinforcement follows the profile of the sheet exactly, eliminating any possibility of air pockets being trapped under the reinforcement.
- Any cracking within the sheets should also be reinforced.
- Finish with an additional coat of Polyshield over the scrimmed area.

## APPLICATION OF SCRIM

Reinforcing Scrim is embedded into the wet Polyshield basecoat avoiding creasing. Adjacent lengths of the reinforcement must overlap by 75mm. Finish with one coat of Polyshield topcoat at the recommended rates.

## APPLICATION OF COATINGS

- **STIR WELL BEFORE USE**
- **DO NOT THIN**

**To a dry and cleaned surface:**
- Polyshield Basecoat is applied by brush or roller to the clean prepared and primed substrate at a minimum of 1 litre per square metre.

- Polyshield Reinforcing Scrim (100gm$^2$) is embedded into the wet Polyshield Basecoat avoiding creasing. Adjacent lengths of the reinforcement must ovelap by a minimum of 75mm ensuring that there is sufficient coating to fully encapsulate the lap.

- Polyshield Topcoat is then applied by brush or roller over the dry, clean Polyshield reinforced Basecoat at a minimum of 0.75 litres per square metre.

- At each stage a check must be made for the presence of pinholes and missed areas, which can be rectified by applying additional coating as neccessary.

- Application rates for different substrate types are given in the table below.

- **The substrate and ambient temperature for the application of the system must be between 2°C and 35°C.**

**DO NOT APPLY** to frozen or damp surfaces.
**DO NOT APPLY** in hot direct sunlight or coating may skin.

Spreading rate unreinforced over metal: 0.8 litres per square metre (includes both coats).

## MINIMUM SPREADING RATES

| | Basecoat /m² | Topcoat/m² |
|---|---|---|
| **METAL SURFACES**<br>Unreinforced over Metal: | | 0.8 lt |
| **SMOOTH**<br>Asphalt, Carrier, Single Ply Membranes | 1.0 lt | 0.75 lt |
| **INTERMEDIATE**<br>Worn Mineral Felt | 1.25 lt | 0.75 lt |
| **ROUGH**<br>Heavy Mineralised Felt | 1.5 lt | 1st 0.5 lt<br>2nd 0.75 lt |

*The above spreading rates are for guidance purpose only.*

## DRYING TIME

**PRIMER**
Britannia Polyshield Primer can take up to 1 day to cure but can be over coated when dry.

**POLYSHIELD BASECOAT**
> Surfaces must be COMPLETELY DRY prior to application of Polyshield Basecoat.
> Up to 8 hours or overnight depending on temperature and conditions.

**POLYSHIELD TOPCOAT**
> Surfaces must be COMPLETELY DRY prior to application of Polyshield Topcoat.
> Up to 8 hours or overnight depending on temperature and conditions.
> Full cure: up to 7 days.
> The product may remain slightly soft for a further period depending on climatic conditions, this is not detrimental to the waterproofing qualities of the product.

## WATER REPELLENCY

> Rainfall after application has no adverse effect.

## CLEANING OF EQUIPMENT

> For cleaning equipment use White Spirit.

## SHELF LIFE

> Up to two years if stored correctly in an unopened container.


*Roller application*

# PRIMER GUIDE FOR POLYSHIELD REINFORCED WATERPROOFING SYSTEM

| Substrate | Britannia Polyshield Primer | Britannia Zinc Phosphate Metal Primer | Britannia 1 Pack Etching Primer | Britannia Universal QD Primer-Sealer |
|---|---|---|---|---|
| **POROUS AND FRIABLE** | | | | |
| Felted Surfaces | ✓ | | | |
| Asbestos Cement | ✓ | | | |
| Concrete | ✓ | | | |
| Weathered Asphalt and Bituminous Surfaces | ✓ | | | |
| **OSB/PLYWOOD AND WOODEN SUBSTRATES** | | | | |
| Timber Decks | ✓ | | | |
| Plywood | ✓ | | | |
| **METALS** | | | | |
| Ferrous | | ✓ | | |
| Galvanised Metal | | | ✓ | |
| **NON-FERROUS METALS** | | | | |
| Lead (not to be used on new lead) | | | | |
| Aluminium | | | ✓ | |
| Copper | | | ✓ | |
| **SINGLE PLY MEMBRANES** | | | | |
| EPDM* | ✓ | | | |
| PVC* | | | | ✓ |
| HYPALON* | | | | ✓ |
| TPO ROOF MEMBRANES* | | | | ✓ |
| PLASTISOL COATED SUBSTRATES* | | | | ✓ |
| **OTHERS** | | | | |
| Fibreglass and GRP | ✓ | | | |
| Previously painted or coated substrates* | ✓ | | | |

For difficult substrates and technical advice, please contact us

**IT IS GOOD PRACTICE TO INSPECT AND CARRY OUT ADHESION TESTS INCORPORATING THE PRIMER AND POLYSHIELD. BEFORE STARTING WORK PLEASE SEE THE SEPARATE ADHESION TEST DOCUMENT ON OUR WEBSITE.**

*Adhesion/pull off test required.

## CLEANING OF EQUIPMENT

> For cleaning equipment use White Spirit.

## SHELF LIFE

> Up to 2 years if stored correctly in an unopened container

## PRECAUTIONS

> **Flammable** keep away from sources of ignition.
> Ensure good ventilation during application.
> Wear gloves, goggles and suitable protective clothing.
> In case of contact with eyes rinse immediately with plenty of water and seek medical advice.
> Remove splashes from the skin with a recognised hand cleaner or plenty of soap and water.
> Keep out of reach of children.
> Do not use near fishponds.
> Toxic to aquatic organisms. May cause long term adverse effects in the aquatic environments.
> Do not empty into drains.

## SAFETY

Good working practice should be followed and safety/ walking boards should be utilised where required.

## MAINTENANCE AND REPAIR

**Maintenance**
Roofs should be inspected at least anually in autumn after leaf fall to ensure vegetation and other debris is cleared from the roof and drainage outlets.

**Repair**
Any damage to the system must be repaired as soon as possible to ensure that waterproofing integrity is maintained.

## IMPORTANT NOTES ON APPLICATION AND LIMITATIONS

> Britannia Polyshield is not recommended for the treatment of fish or aquatic ponds or internal use.
> Air conditioning vents should be sealed for a minimum of 24 hours during and after the application.
> **MINIMUM FINISHED FALL: when using this product it is important that a minimum finished fall of 1:80 is achieved, as stated in BS 6229:2018 (Code of Practice for the application of Liquid Applied Waterproofing Systems to flat roofs with continuously supported coverings)**.
> Do not apply Britannia Polyshield on substrates with rising moisture.
> Britannia Polyshield is not suitable for permanent water immersion.
> Do not dilute Britannia Polyshield with any solvent.
> On substrates likely to exhibit outgassing, apply during falling ambient and substrate temperatures. If applied during rising temperatures “pin holing” may occur from rising air.
> Product should be used in conjunction with a safe system of work. Ensure an adequate assessment of all site risks has been conducted prior to work commencing. Refer to the product safety datasheet for further guidance.
> Do not use Britannia Polyshield for indoor applications
> Do not apply close to the air intake vent of running air conditioning unit.
> The product can be applied by brush or roller. Work well with a brush in difficult areas. Apply subsequent layers after the first layer has cured tack free.
> Use strips of Britannia Reinforcing Scrim, in order to cover joints, connections or overlaps of bituminous sheets. Please ask our technical service department for detailed recommendations.
> The suitability of each system to receive foot traffic varies. For specific recommendations, please contact our technical service department.
> Do not apply adhesives or cementitious products (e.g. tile mortar) directly onto Polyshield.
> Do not use grit salt and/or other de-icing agents between coats of Polyshield as this may affect the cure and inter-coat adhesion of the product.
> Whilst Polyshield is resistant to most commonly encountered atmospheric pollutants, proprietry cleaning solutions and environmental spoilage, the suitability of the product for use in applications with increased chemical resistance requirements should first be established in consultation with our technical service department.

## THE BRITANNIA SERVICE

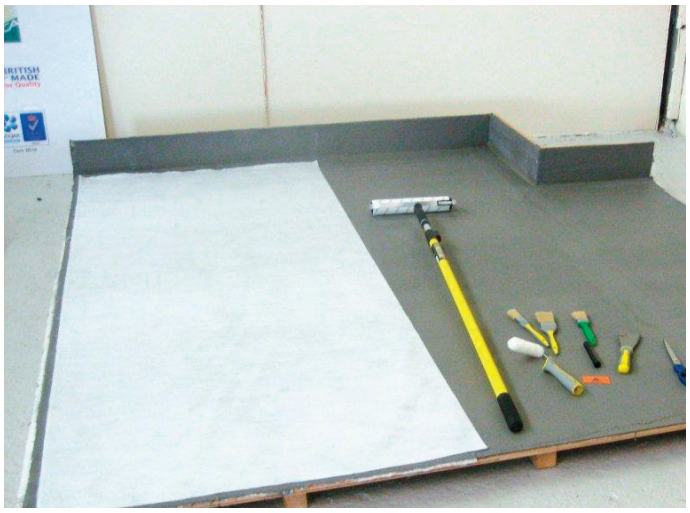
> Nationwide sales and technical personnel.

> Product warranties for approved contractors.

> General specification reports/assistance.

> Free on-site advice/surveys and technical reports.

## THE BRITANNIA TRAINING CENTRE

**PLEASE CONTACT US FOR FURTHER DETAILS ON OUR APPROVED CONTRACTOR PROGRAMME**

## FURTHER INFORMATION

**There is a Code of practice from LRWA-"Specification and use of Liquid Applied Waterproofing Systems" on www.lrwa.org.uk which can be consulted for general advice.**

If in doubt regarding any of the above points, please contact our technical services department for advice.

**A Material Safety Data Sheet is available on request.**

*It is the contractors responsibility to ensure that this data sheet is current prior to using the product.*

## DISCLAIMER

All products mentioned in this document must be installed in accordance with the relevant system specification and/or product data sheets. For any application outside the scope of these documents, please consult Britannia Paints to determine suitability. For specifications/applications not approved in writing by Britannia Paints will not be covered by any guarantee.

NFRC LEADING ROOFING EXCELLENCE

MADE IN BRITAIN

ISOQAR REGISTERED UKAS MANAGEMENT SYSTEMS 0026

Certificate Number 8516
ISO 9001

BRITANNIA

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