

permare[®] epw - tropical

CONTAINMENT MEMBRANE FOR POTABLE WATER

DESCRIPTION

Permare[®] EPW Tropical is a two component, seamless liquid system which combines the features of both epoxies and polysulphides to produce coatings with outstanding physical properties. The material cures to produce a tough, flexible coating especially suited to applications where abrasion and chemical resistance is required.

Permare[®] EPW Tropical has been developed specifically for potable water applications.

USES

Permare[®] EPW Tropical is designed to retain, exclude or protect structures from water, oils, fuels and many aggressive chemicals. Typical applications include:

- Reservoirs - potable water
- Storage tanks and silos
- Secondary containment - bund lining or earthen containment bunds (using a fabric carrier for the coating)
- Concrete, masonry, asphalt or steel substrates requiring a chemical and/or abrasion resistant coating
- Water & Sewerage Industry Construction
- Canals and culverts
- Above or below ground applications

FEATURES

- Permare[®] EPW Tropical - WRAS (Water Regulations Advisory Scheme).
Listed for use in contact with potable water, tested to BS6920. Directory Reference No. 0504507.
- Excellent chemical, abrasion and impact resistance
- Good low temperature flexibility
- Low gas permeability
- Excellent UV and weather resistance
- Does not contain solvents
- Easy to apply
- Liquid applied - providing a seamless coating with no vulnerable joints
- Can accommodate difficult surface profiles and shapes
- High bond strength to substrate
- Two component, colour coded system to ensure homogeneous mixing on site
- Long and effective life
- On site quality assurance programme
- Applied only by authorised and trained contractors

TECHNICAL DATA

PROPERTY	VALUE
Application Temperature Range ¹	25 - 50°C

¹ This minimum temperature is a requirement of our WRAS Approval. For temperatures outside this application range please contact our Customer Services Department.

Maximum Humidity During Application	85%
Typical Working Life (Material Temperature)	
@ 50°C	20 mins
@ 40°C	30 mins
@ 30°C	60 mins
@ 25°C	100 mins
Minimum Overcoating Time ² (Ambient Temperature)	
@ 50°C	4 hrs
@ 40°C	6 hrs
@ 30°C	10 hrs
@ 25°C	13 hrs
Typical Tensile Strength (BS903: A2:1995) @ 23°C	7 MPa
Typical Elongation at Break (BS903: A2:1995) @ 23°C	20%
Adhesion to Substrate (BS EN ISO 4624: 2003)	
Steel	> 2 MPa
Concrete	> 1 MPa
Hardness (Shore D) (BS2782: Pt 3: Method 365B: 1992 ISO 868: 1985)	52
Water Vapour Transmission Rate (1mm coating - ASTM E96-80)	1.1 - 1.2/m ² /day
Abrasion Resistance: (ASTM D1044-90) 500 cycles	50 - 75 mg
Low Temperature Flexibility (0.25 mm coating) (ASTM D3111-88)	Pass at -26°C
For information about the chemical resistance of Permare [®] EPW Tropical please consult our Customer Services Department.	

SURFACE PREPARATION

It should be stressed that the success of any waterproofing system is dependent on the thoroughness of the surface preparation.

Concrete

New concrete substrates should be a minimum of seven days old. The substrate must be clean, dry and structurally sound. It must be free from laitance, oils and all other surface contaminants. Repairs to damaged concrete can be made using Metaset[®] Rapid Repair Mortar.

Steel

On steel surfaces all rust, dirt and contamination should be removed to expose bright metal to achieve a surface finish to comply with Swedish standard Sa 2.5.

If existing coatings are present, ensure that they are firmly

² Minimum overcoating time is based on good air circulation. This may increase in enclosed situations.

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adhered to the substrate. If the bond is unsatisfactory, the existing coatings should be removed back to a sound surface. It may be necessary to check the compatibility of the existing coating with Permare[®] EPW Tropical.

For compatibility with other construction materials or where additives, cement replacement or curing compounds have been used please consult our Customer Services Department.

APPLICATION

No primer is required. For excessively porous concrete substrates Permare[®] Putty is an economical and effective method of filling the imperfections and sealing the surface pores of the concrete.

Mixing

Permare[®] EPW Tropical is a two-component system, supplied in pre-weighed quantities ready for on-site mixing.

To ease application we recommend that the material is warmed to between 15 °C and 25 °C.

Settlement may occur during storage and transportation; prior to use each component should be stirred separately using a mechanical stirrer, such as an air-driven drill (400-800rpm) and paddle. The contents of each component (Part A & B) should then be combined together and stirring continued until the two components are fully mixed and a uniform colour is produced.

Membrane

The membrane is applied in two coats.

Permare[®] EPW Tropical can be applied by spray, brush or short fleece roller to give a minimum measured wet film thickness of 0.25mm per coat.

When applying by brush or short fleece roller apply the mixed material to the substrate in even strokes, ensuring that an even thickness of material is applied. The direction of the application strokes should alternate from a vertical to horizontal movement during application.

When spray applying use a plural component unit with in-line heaters. For further details please contact our Customer Services Department.

Allow the first coat to become 'tack-free' before application of the second coat.

Please refer to Document No. QA215T for the return to service conditions of Permare[®] EPW Tropical. Please contact our Customer Services Department for a copy.

Slip Resistant Membrane

Where a waterproof slip-resistant finish is required, the first coat of Permare[®] EPW Tropical should be applied to give a minimum wet film thickness of 0.75mm, which will require a minimum coverage rate of 0.9kg/m². Allow the first coat to become 'tack-free' before application of the second coat.

The second coat should be applied to give a minimum wet film

thickness of 0.5mm which will require a minimum indicative coverage rate of 0.6kg/m². This should then be broadcast, until refusal, with a suitable aggregate before the coating cures. In heavily trafficked applications the addition of a sealer coat will enhance long-term aggregate retention.

For information on recommended aggregates and sealers please consult our Customer Services Department.

COVERAGE

0.3kg/m²/coat (to give a standard 0.25mm coat)

This coverage rate is based on a smooth substrate. The required coverage rate will vary with surface texture and porosity.

COLOURS

Permare[®] EPW Tropical is supplied in Dark Grey.

CLEANING

All tools and equipment should be cleaned with Stirling Lloyd Solvent No.'s 1 before the material is allowed to cure.

PACKAGING & STORAGE

40kg, 200kg & 420kg kits & 1 tonne recyclable IBC's.

All components of the Permare[®] EPW Tropical system should be stored in cool, dry, protected conditions, out of direct sunlight and in accordance with the relevant site Health & Safety regulations. Long term storage temperatures must not exceed 25°C.

Stored in unopened containers, under these conditions, the components have a shelf life of six months.

ANCILLARIES

Stirling Lloyd produces a range of products to complement the Permare[®] EPW Tropical system. These include:

- Metaset[®] – a range of resin based rapid repair mortars
- Sentinel[™] – a range of Expansion Joints
- SL7000[®] – a range of anti-carbonation coatings to provide structural protection whilst improving aesthetics
- Sealants – a range of flexible sealants for all joints and cracks
- Permare[®] Reinforcement Scrim

HEALTH & SAFETY

The Material Safety Data Sheet must be read, understood and available on site before commencing work.

It is the Company's policy to take all reasonable steps to prevent injury to all property and personnel from foreseeable hazards. This extends to the public in so far as they come into contact with the Company or its products.

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GENERAL INFORMATION

Permare[®] EPW Tropical is part of a wide range of specialist waterproofing, surfacing and repair materials manufactured and supplied by Stirling Lloyd. If you require any further information on this or any other of our products, please contact our Customer Services Department or visit www.stirlinglloyd.com.



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