

## Structural Waterproofing Membrane

### Description

**Blueshield PmB** is a two part, blue pigmented polyurethane elastomer. The spray applied membrane is pigmented blue to highlight application and gels in seconds to provide a seamless, fully adhered barrier to ingress of water and other contaminants.

The system has over 40 years unparalleled track record with thousands of structures successfully waterproofed throughout the world.

### System Features

- Class leading adhesion
- Excellent crack bridging
- Abrasion resistance
- Resistant root/microbial attack
- Homogenous watertight seal
- Good chemical resistance
- Low flammability rating
- Tear resistance
- Applied by own spray personnel

### Surface Preparation

The success of the waterproofing system is dependent upon the bond achieved with the substrate.

#### Concrete

Concrete shall be minimum 7 old, substrate moisture below 5%. The concrete substrate shall be cleaned using mechanical shot blasting to achieve surface free from any contamination and profile as CPS 3-4, before application of PmB membrane.

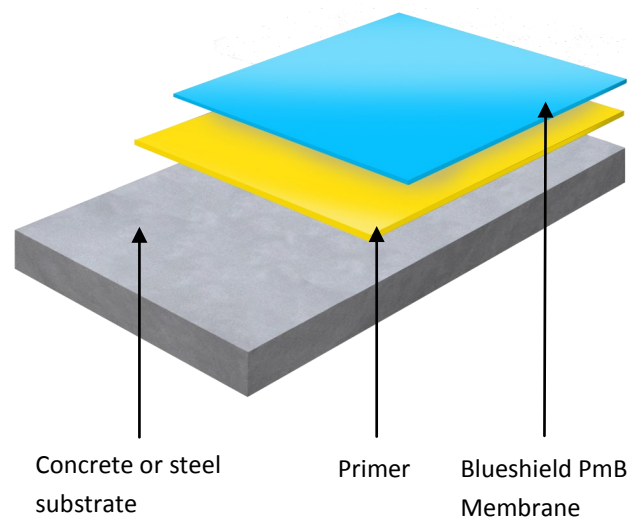
#### Tremco CPG repair products

#### Steel

On steel surfaces all rust, dirt and contamination should be removed to expose bright metal to achieve a high quality surface finish.

For compatibility with other construction materials or where additives, cement replacement or curing compounds have been used consult our technical team.

### The System



### Applications

**Blueshield PmB** provides a complete waterproofing system to protect the substrate from the corrosive effects of water and chloride ions.

Applications include:

- Podiums
- Inverted, green, brown and blue roofs
- Rail - Network Rail approved product
- Airports
- Basements
- Tunnels



## Technical Information

Property	Value
Density of spay applied elastomer, DIN 53479 mg/m <sup>3</sup>	0.85 - 0.95
Shore A Hardness BS903 Part A2 at 23°C	80
Rebound Resilience BS903 Part A8 at 23°C	26%
Elongation At Break ASTM D638 exceeds 80% requirement	>250%
Tensile Strength ASTM D638 exceeds 930 psi requirement	1815 psi (12.5 N/mm <sup>2</sup> )
Tear Strength BS903 Part A3 23°C	28KN/m
Low Temperature Flexibility & Crack Bridging Ability ASTM test method Cert C836 at -26°C	Conforms
Static & Dynamic Crack Bridging Test BRE tested method EN1062-7 +23°C and -10°C maximised	In extension 14mm
Crack Endurance	Undamaged
Bending Test Temperature range -20°C to -50°C	Undamaged
Resistance To Flow & Heat Flow Test 70°C Heat Test 240°C	No effect undamaged
Abrasion Resistance DIN 53516m <sup>3</sup> Retention of mechanical properties, torsion modules DIN 53443	160mm <sup>3</sup> -40°C + 110°C
Glass Transition Temperature DIN 53445	-42°C
Water Tightness University of Braunschweig 72 hours at 7 bar pressure. 15m in sweater = 1.5 bar	Watertight
CO <sub>2</sub> Water Vapour Permeability University of Braunschweig DIN 52615 test report 437/5043-1	Confirmed 486, sd = 1.0m
CO <sub>2</sub> Permeability Englefield U = 64,000 Sd = 15.0m	Confirmed
Water Absorption Coefficient DIN 52617 E	7.6 x 10 <sup>-3</sup> kg/m <sup>2</sup>
Resistance To Chlorides	Resistive
Pull Off / Adhesion To Concrete ASTM D4541 requirement	370 psi (2.55 N/mm <sup>2</sup> )
Pull Off / Adhesion To Steel ASTM E96 procedure BW	855 psi (5.98 N/mm <sup>2</sup> )
Water Vapour Transmission ASTM E96 procedure BW English units grams /ft / hr no requirements Metric units grams / m <sup>2</sup> / 24 hours no requirements	0.1 1.7
Artificial Weathering - 1000 hours ASTM D4587 evaluate changes On elongation & tensile strength Requirement Elongation +10% -20% Requirement Tensile ±10% relative	+6.0% +0.9%
Electrical Sensitivity ASTM test method D257 Requirements >5 x 10 <sup>3</sup> ohm - cm	91 x 10 <sup>6</sup> ohm-cm
Puncture Resistance ASTM test method E154 Requirements 95kgf min	174 kgf

## System Components

### Blueshield PmB Primer

A single component, polyurethane based primer, which provides excellent adhesion between the substrate and **Blueshield PmB** membrane. The primer is applied using a roller, brush or airless sprayer and is ideal for use on concrete and steel. Primer is prepared at site by adding 1:1 Ethyl Acetate, by mechanical mixing for 3-5 mins with slow speed drill. Please refer the TDS of BlueShield PmB Primer. Typical coverage for primer mix is 50 –200 g / sq.m . (grams per square meter)

### Blueshield PmB membrane

Blueshield PmB membrane is applied via plural component, high temperature, medium-high pressure spray equipment at 1:1 ratio. Please refer the Blueshield PmB application manual and application log before commencing the application at site.

### Blueshield PmB Top Coat

Blueshield PmB top coat is an UV stable coating designed to provide UV protection for applications where Blueshield PmB system is intended to be kept exposed to environment (non-concealed) during the course of its service life. Refer the Technical Datasheet of Blueshield PmB Top Coat as provided. Typical coverage for Topcoat is 100 – 200 g / sq.m. (grams per square meter)

### **Cleaning**

All tools and equipment should be cleaned with Pitchmastic PmB's solvent before the material is allowed to cure.

### **Storage**

All components of the **Blueshield PmB** system should be stored in a cool, dry, place, out of direct sunlight and in accordance with the relevant Health & Safety regulations.

### **Technical Support**

Further information can be obtained on request from our technical department.

### **Health & Safety**

Appropriate literature has been assembled which provides information concerning the health and safety precautions that must be observed when handling **Blueshield PmB** components.

You must read and become familiar with the available information concerning their hazards, proper use and handling. This cannot be over emphasised. Information is available in several forms e.g. Material safety data sheets and product labels.