



Pitchmastic PmB

Total Defense Against
Corrosion and Water Intrusion
for Critical Infrastructure

PITCHMASTIC PmB

www.tremcocpg-asiapacific.com

About

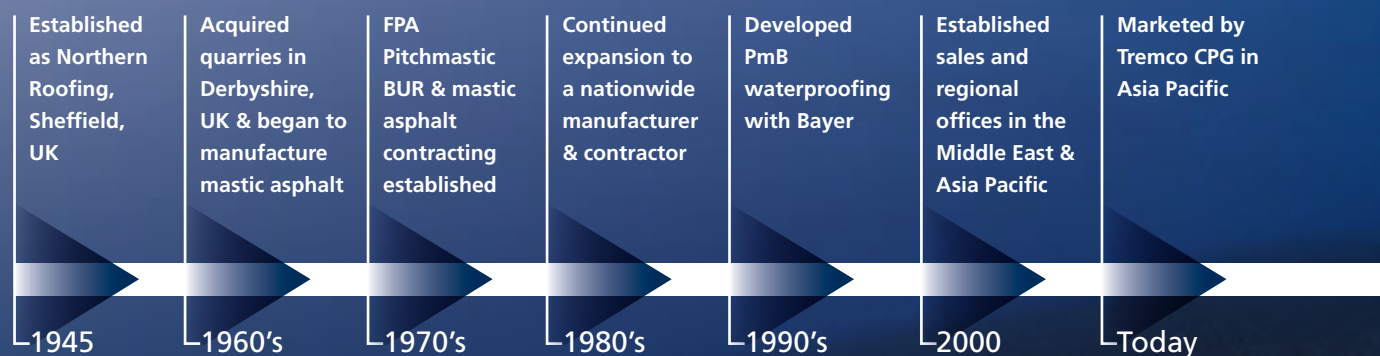
Pitchmastic PmB is at the forefront of technological developments in the world of structural waterproofing and was established over 70 years ago with a commitment to developing new and more effective ways of waterproofing structures.

Pitchmastic PmB has established local applicator partnerships in Europe, Middle East, America, Africa and Asia Pacific.

Pitchmastic PmB is a USL Group brand, marketed by Tremco Construction Products Group across Asia Pacific.



Evolution of the Brand



Why Waterproof Structures?

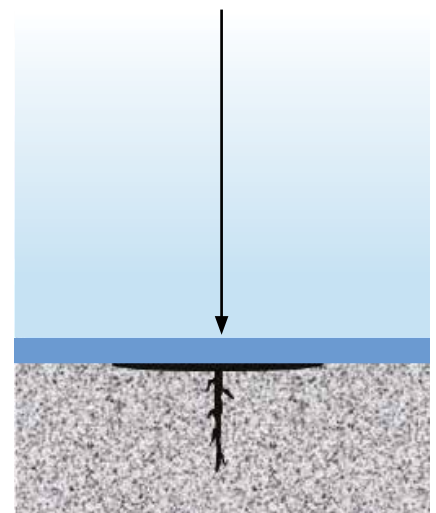
The Effects Of Structural Corrosion

- Constant repair & maintenance
- Reduction in the service life of structures
- High cost of remediation
- Operational shut down cost caused by water ingress & repairs

Key Engineering Considerations

- **Crack Bridging**
 - Surface cracks are inevitable in concrete construction
 - Tensile strength
 - Bond to substrate
- **Typical Design Life**
 - Structures must be designed to stand the test of time
 - Non-degradable
 - Durable & robust
- **Resistance To Chemicals & Chlorides**

PmB waterproofing Layer



Key Design Considerations



Resistance To Abrasion



Resistance To Fire



Crack Bridging



Water Tightness



Rapid Installation



Chemical Resistance



Excellent Weather Resistance

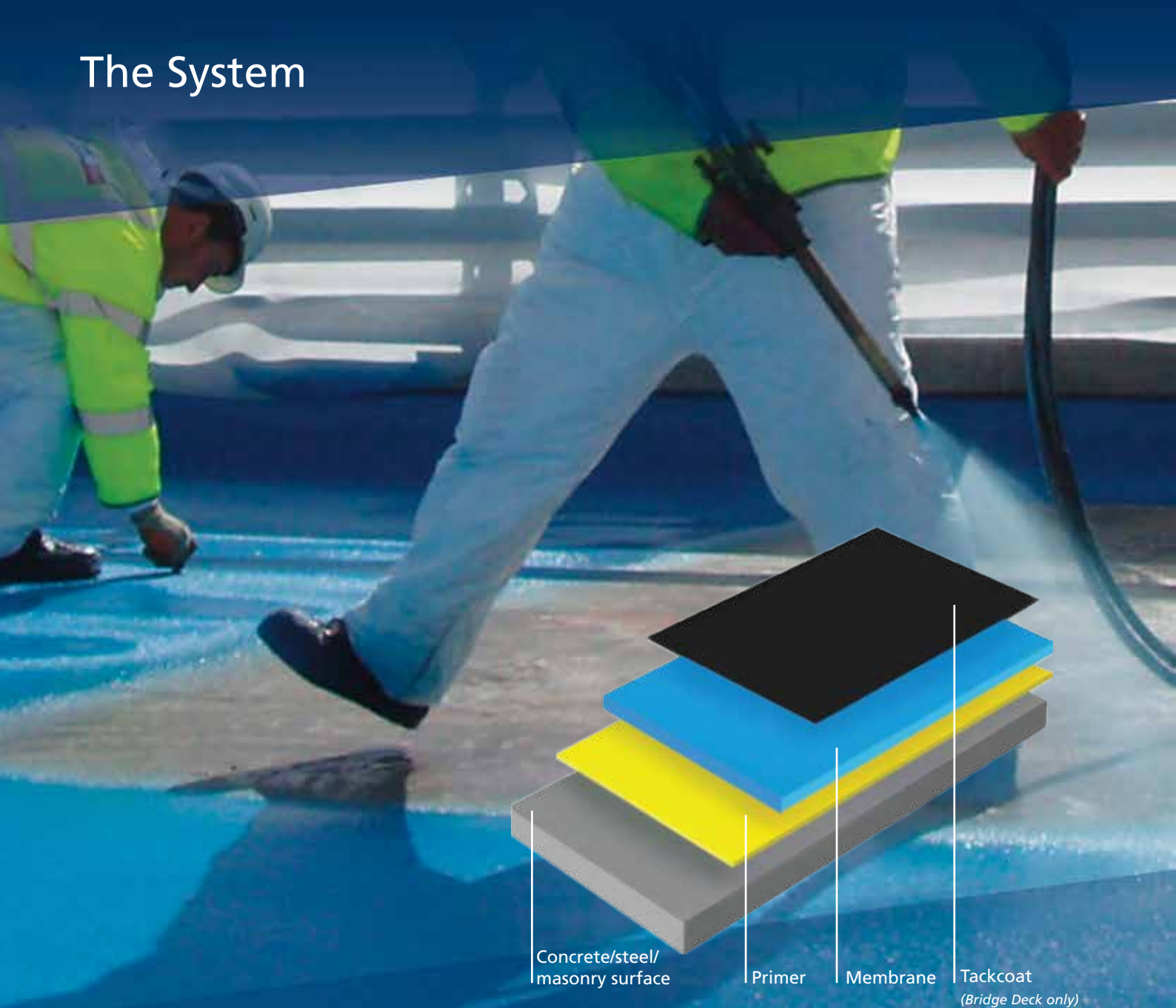


Resistance To Heat And Damage From Asphalt Overlay



Adhesion

The System



What is PmB?

- Two component PU spray system
- 100% solids reactive resin content
- Solvent free
- No fillers / extender loading
- Rapid setting – 5-8 seconds gel time
- Tack free after approximately 1 minute
- Can be walked on after approximately 10 minutes
- Elastic after approximately 45 minutes

Spray Applied, Seamless Structural Waterproofing

PmB forms a flexible, chemically resistant seamless membrane tough enough to outlast the design of many structures. PmB has exceptional bond strength to all commonly used substrates, has excellent crack bridging capability, a life expectancy in excess of 30 years and holds British Board of Agrément approval. Tested and approved throughout the world to the highest standards, the PmB system now adds the UK's Network Rail and London Underground (LUL) approvals to its ever growing list of accreditations.

System Benefits:

- Spray applied - rapid curing
- Excellent global track record
- Seamless membrane
- Excellent crack bridging properties
- Quality assured - including pin hole survey
- Durable, corrosion protection waterproofing
- BBA / HAPAS certified
- Longevity in service life

Critical Infrastructure

Critical infrastructure includes the vast network of highways, connecting bridges and tunnels, railways, energy and water utilities, and buildings that are necessary to support the smooth and secure operation of a society. The protection of critical infrastructure against physical, environmental, or chemical destruction is crucial in ensuring the resilience and continuity of these vital systems. Disruption to any of these systems can lead to economic loss and compromised public safety.

Total Defense

Pitchmastic PmB is an impermeable layer that not only prevents water intrusion but also acts as a formidable shield against corrosion and erosion, all of which can jeopardize the stability and safety of the entire infrastructure.

In the images on the right, Pitchmastic PmB was applied at a thickness of 26mm to protect the concrete bridge piers in Taiwan which have suffered impact and abrasion from water and rocks after each typhoon season.

Essentially, Pitchmastic PmB provides critical infrastructure with unmatched protection that guarantees long-term durability and functionality in the face of various punishing factors.



Areas of Application



Waste Water Treatment Plants



Water Retaining Structures



Bridges



Flyovers

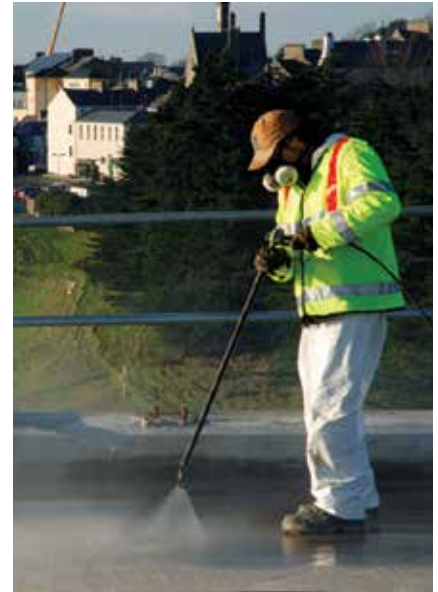


Tunnels



Chemical Containers

Installation Process



Pre Installation Checks

Surface Preparation

- No system will perform if preparation is not carried out satisfactorily
- Clean, dry and free of contamination

Primer

Applied by airless spray or roller



Application Layer

Tackcoat (for bridge deck)

- Polymer modified
- 95°C Softening point Bitumen emulsion
- Applied by squeegee over sanded key layer

Sanded Key Application Layer (for bridge deck)

1. Primer PMCS/01
 2. 1-3mm Silica sand
- Provides enhanced bonding to overlay



Membrane

- PmB two part Polyurethane spray applied elastomer
- Installed using computerised two component spray machines

Spray Technology

- Versatile to suit access, application area and clients programmes and productivity requirements

QA/QC Application



Application QA/QC – Pinhole Check

QA/QC Quality Testing

QA/QC Quality Thickness

International Test Accreditation

For Bridge Decks

HAPAS
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HAPAS Certificate
10/H164
Product Sheet 1

PITCHMASTIC BRIDGE DECK WATERPROOFING SYSTEM
PmB BRIDGE DECK WATERPROOFING SYSTEM

This HAPAS Certificate Product SheetTM is issued by the British Board of Agreement (BBA), supported by Highways England (HE) (acting on behalf of the Overseas Organisations of the Department for Transport; Transport Scotland; the Welsh Government and the Department for Infrastructure, Northern Ireland), the Association of Directors of Environment, Economy, Planning and Transport (ADEEPT), the Local Government Technical Advisers Group and Industry Bodies. HAPAS Certificates are normally each subject to a review every three years.
(3) Notwithstanding to its Certificate.

This Certificate relates to the PmB Bridge Deck Waterproofing System for use as a waterproofing system for concrete decks of highway bridges.

CERTIFICATION INCLUDES:

- factors relating to compliance with HAPAS requirements
- factors relating to compliance with Regulations where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.



KEY FACTORS ASSESSED

Performance — the system meets the requirements of the Guidelines Document for the Assessment and Certification of Waterproofing Systems for use on Concrete Decks of Highway Bridges (see section 5).

Durability — provided the installed system is not damaged during subsequent resurfacing, it will provide an effective waterproof layer to the concrete bridge deck (see section 8).

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agreement

Date of Third Issue: 12 May 2020

Originally certificated on 22 September 2010



Hardy Giesler
Chief Executive Officer

The BBA is a UKAS accredited certification body - Number 123.

The schedule of the current scope of accreditation for product certification is available in pdf format via the UKAS link on the BBA website at www.bbacerts.co.uk

Readers MUST check the validity and latest issue number of this Agreement Certificate by either referring to the BBA website or contacting the BBA directly.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

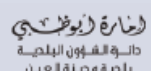
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Global Approvals

- Abu Dhabi DOT
- ADA Saudi Arabia
- Al Ain Municipality
- Dubai RTA
- Lusail Development, Qatar
- Ashghal, Qatar
- Muscat Municipality and MOTC
- Kingdom of Bahrain Roads and Housing
- Qatar Petroleum
- Kuwait MPW
- Department of Transport BD47/99, BBA HAPAS UK
- LSETR Cert RAT 9359 Finland
- BAM Institute ZTV-BEL B3/87 Germany
- LTA Singapore
- EMPA Cert 4944-1-2-3 Switzerland
- New Jersey Rail, New York DOT
- MASS DOT Highways, USA



For Tanking Systems

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BBA APPROVAL
INSPECTION
TESTING
CERTIFICATION
Agreement Certificate
06/4380
Product Sheet 1

PITCHMASTIC PmB WATERPROOFING SYSTEM
BLUESHIELD TANKING WATERPROOFING SYSTEM

This Agreement Certificate Product Sheet⁽¹⁾ relates to the Blueshield Tanking Waterproofing System, a two-part, polyurethane spray-applied system for use on solid concrete floors and underground structures, and for internally and externally applied tanking below ground.

(1) Hereinafter referred to as 'Certificate'.

CERTIFICATION INCLUDES:

- factors relating to compliance with Building Regulations where applicable
- factors relating to additional non-regulatory information where applicable
- independently verified technical specification
- assessment criteria and technical investigations
- design considerations
- installation guidance
- regular surveillance of production
- formal three-yearly review.

KEY FACTORS ASSESSED

Resistance to water and water vapour — the system provides an effective barrier to the passage of water under hydrostatic pressure and water vapour from the ground (see section 6).

Resistance to mechanical damage — the system will accept the limited foot traffic and loads associated with installation and in service (see section 7).

Durability — under normal service conditions, the system will provide an effective barrier to the transmission of moisture for the life of the structure in which it is incorporated (see section 9).

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agreement

Date of Fifth issue: 10 November 2022
Originally certificate issued October 2004

Hardy Glasier
Chief Executive Officer

The BBA is a UKAS accredited certification body number 223.
The scheme of the current scope of accreditation for product certification is available in pdf format on the UKAS website at www.ukas.co.uk.
Readers should check the validity and scope of this Agreement Certificate by either referring to the BBA website or contacting the BBA directly.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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For Roof Decks

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BBA APPROVAL
INSPECTION
TESTING
CERTIFICATION
Agreement Certificate
23/6877
Product Sheet 1 Issue 1

TREMCO CPG UK ROOF WATERPROOFING SYSTEM
ALPHAGUARD BLUESHIELD INVERTED WATERPROOFING SYSTEM

This Agreement Certificate Product Sheet⁽¹⁾ relates to the AlphaGuard Blueshield Inverted Waterproofing System, a two-part spray-applied polyurethane, for use as an elastomeric waterproofing layer on pitched, flat and zero fall roofs, and in protected roof, blue roof specifications in combination with a stormwater attenuation system⁽²⁾, roof garden and green roof specifications on new or existing roofs.

(1) Hereinafter referred to as 'Certificate'.
(2) The stormwater attenuation system is outside the scope of this Certificate.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements⁽³⁾

- regular assessment of production
- formal 3-yearly review

The BBA has awarded this Certificate to the company named above for the system described herein. This system has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agreement

Date of issue: 6 June 2023

Hardy Glasier
Chief Executive Officer

The BBA Agreement Certificate is issued under the BBA's Inspection Body accreditation to BS EN 17065. Sections marked with P are not issued under accreditation.
The BBA is a UKAS accredited Inspection Body (No. 6045) Certification Body (No. 0123) and Testing Laboratory (No. 3532).
Readers MUST check that this is the latest issue of this Agreement Certificate by either referring to the BBA website or contacting the BBA directly.
The Certificate should be read in full as it may be misleading to read it in isolation.
Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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Success Stories



CP3, A Lusail Qatar

25,000m² of PmB waterproofing applied to bridge deck & underpass of this super structure.

Success Stories



Doha Link, Kuwait

Supply and installation of 280,000m² PmB bridge deck waterproofing.



Marina Coastal Expressway Tunnel, Singapore

In 2013, application of 55,000m² of PmB waterproofing was used to remedy a previously failed MMA based system.



Sharjah WWTW, UAE

Sludge digestion and attenuation tanks were waterproofed with PmB Pitchmastic in 1997. After 10 years service, it was found to be in good condition.



Sparta Water Tank, US Military Base, Greece

20,000m² of PmB was spray-applied to the underground tanks in 2019.



Second Severn River Crossing, UK

Application of 176,000m² of PmB spray applied waterproofing.



Temburong Bridge, Brunei

PmB bridge deck waterproofing system was applied to the entire length of this mega bridge.



Scan for Data Sheet