

Bridges

World leaders in structural protection



PITCHMASTIC PmB

International

www.pitchmasticpmb.com



Company Profile

Pitchmastic PmB International is a specialist manufacturer, supplier and installer of high performance waterproofing systems, expansion joints and specialist construction products on a truly global scale.

Pitchmastic PmB International has in-house knowledge, practical application and technical expertise that spans over 70yrs. Even from the early days Pitchmastic PmB international's research and development was key to its success in an embryonic, technically challenging and rapidly evolving construction marketplace. We pride ourselves on being a future thinking progressive company that develops products for the now which are built to last beyond our piers. Systems that deliver unparalleled performance in application whilst offering the client peace of mind and structural protection guaranteed.

Pitchmastic PmB International's global activities are dealt with from a number of offices around the world, and managed through the companies Middle East office situated in Dubai within the United Arab Emirates and Sheffield Office in the United Kingdom, **Pitchmastic PmB International** have dedicated management team, technicians as well as equipment and material warehousing to support all client needs.

Backed by parent company RPM International Inc **Pitchmastic PmB International** continues to strive and develop opportunities around the world by providing clients with professional customer care, full technical, operational and product support.

An **RPM** Company



The need for effective waterproofing solutions

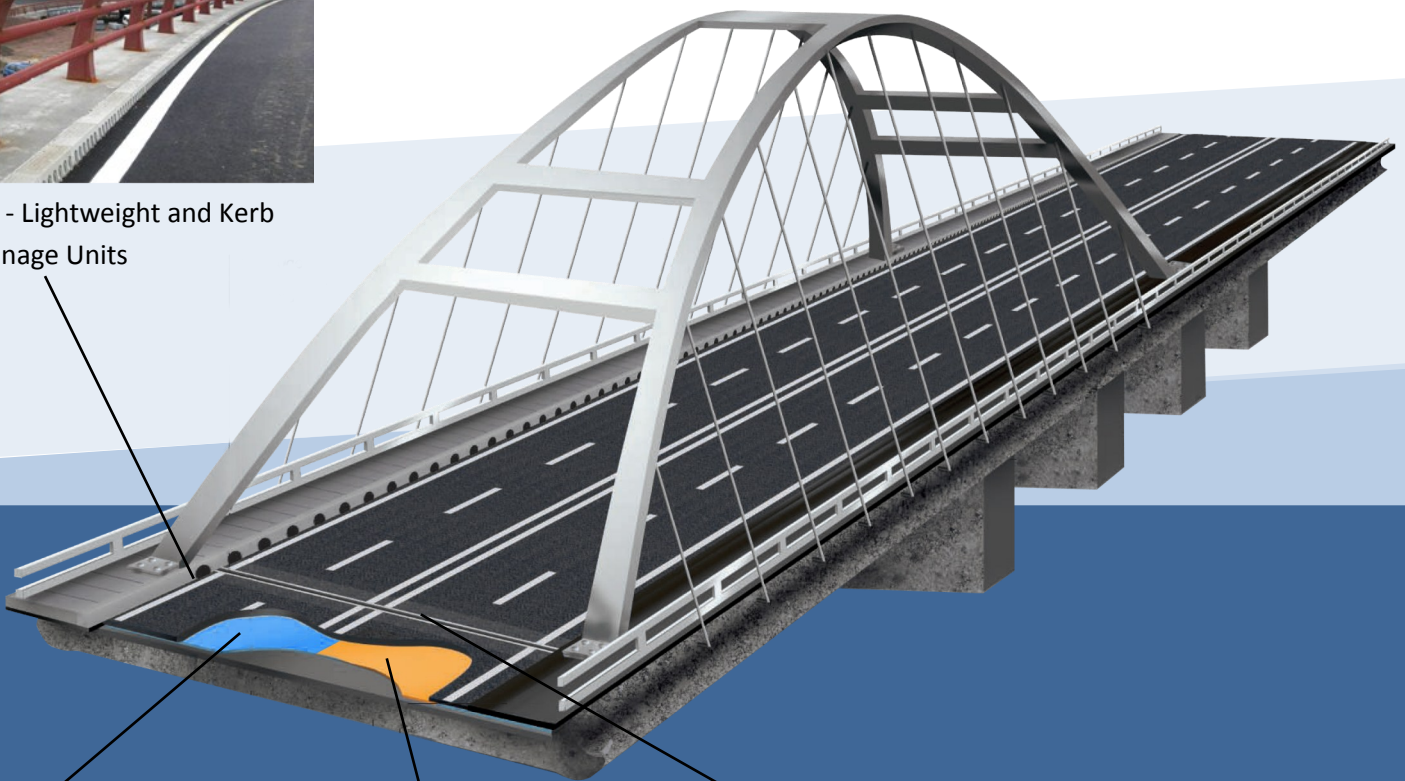
Bridges are at constant attack under stress as water, chlorides, acid rain, de-icing salts and freeze-thaw cycles act on them. Extreme weather cycles, the impact of traffic and vibration place bridges under further stress. As steel reinforcing bars corrode and expand, concrete can crack and deteriorate. The costly disruption caused by resulting repair work impacts on both traffic and safety.

Bridge repairs can often amount to 10-30% of the updated construction cost, and large repairs may even exceed the updated construction cost and still be the preferred option when compared to the cost of traffic interruption and demolition. As moisture is the most significant factor in concrete deterioration, incorporating sufficient waterproofing at the design stage is by far the most cost-effective option.

The solutions:



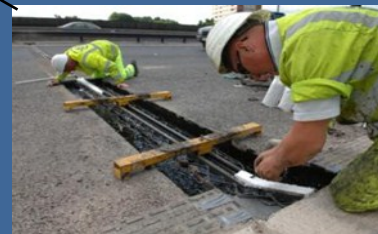
PDS - Lightweight and Kerb
Drainage Units



PmB - Polyurethane
Waterproofing system



Britdex MDP—Methyl
Methacrylate Waterproofing
System



USL - Bridge Expansion Joints

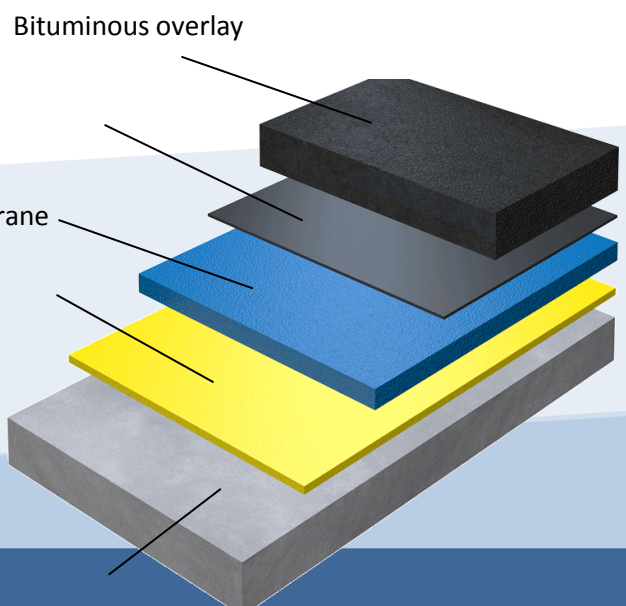
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Products - PmB Waterproofing by Pitchmastic PmB

PmB is a two part, spray applied, durable corrosion protection and waterproofing material. The high performance system is 100% polyurethane containing no fillers or additives and is VOC free. Once applied, PmB has exceptional bond strength to all commonly used substrates, has excellent crack bridging capability and a life expectancy in excess of 30 years and holds British Board of Agrément approval.

The system has gained BBA approval for use as a damp proof and waterproofing membrane for internal and external tanking. The system holds approvals in many continents including European North America, the Middle and Far East.

- Two component PUR spray system
- 100% solids reactive resin content
- Solvent free
- No fillers
- 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



Fast and Easy Installation

PmB membrane is fast and easy to install and is applied as a single coat or in multiple layers. The two component materials of the membrane system are mixed at the spray gun and applied to the substrate using compressed air.

The spray equipment allows complete mobility, spraying vertical surfaces, overhead, behind pipe bays or over corners and edges quickly and effectively. This is achieved due to the membranes ability to gel in seconds preventing curtaining and providing instant protection.

Key material performance

- Class leading adhesion to substrates
- Weather resistance
- Crack bridging
- Tear resistance
- Abrasion resistance
- Water vapour and gas permeability
- Chemical resistance
- Resistant to root and microbial attack
- Sound insulation
- Homogenous watertight seal

Products - Britdex MDP Waterproofing by USL BridgeCare

Britdex MDP is a 100% effective seamless bridge deck waterproofing membrane, flexible and tough enough to outlast the design life of many structures.

Comprising of rapid cure, cold spray applied MMA resin material, the system for a tough, chemically resistant seamless membrane with no vulnerable joints.

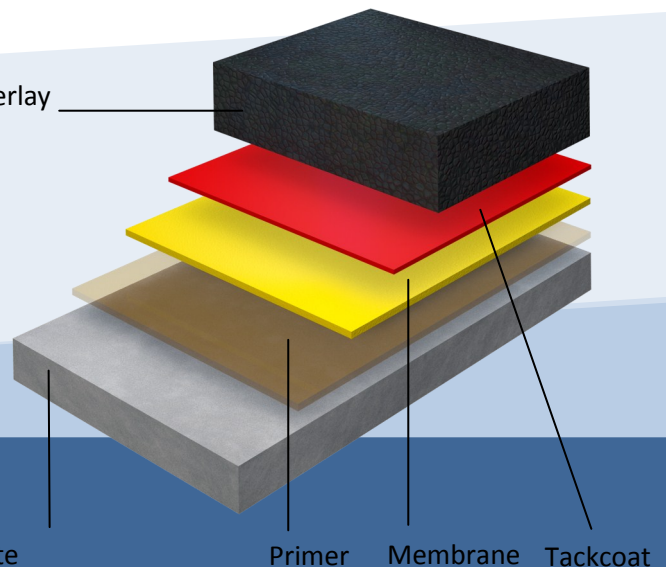
HAPAS
Roads and Bridges



- Seamless coating without vulnerable joints
- Quick and easy sprayable application with rapid cure
- Excellent crack bridging capability
- Durable effective protection against corrosion
- Excellent adhesion to steel
- Versatile system—accommodates all surface contours, horizontal and vertical
- Application by one or two coats



Bituminous Overlay



Typical applications include:

- Concrete bridge decks
- Steel bridge decks
- Bridge piers
- Culverts
- Tunnels

The adaptability of the system allows Britdex MDP to be applied by the conventional spray method, brush or roller and as a one or two coat system.

The system can be applied across a wide range of climatic conditions allowing application virtually all year round.

When applied to dry surfaces Britdex MDP is unaffected by moisture, rain or high humidity.

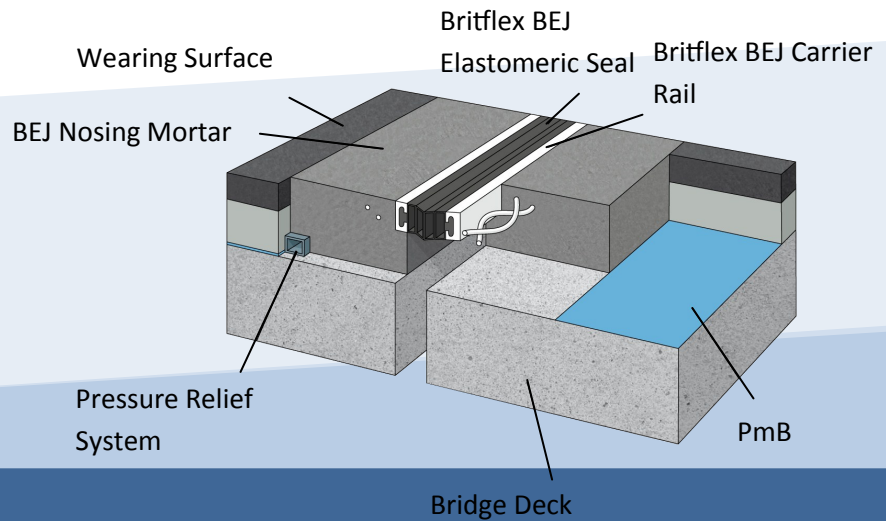
The system is durable, resisting damage during surface operations and has excellent cohesive and bond strength to the bridge deck and surfacing.

Products - Expansion Joints by USL BridgeCare

Pitchmastic PmB International are market leaders in the manufacture, supply and installation of expansion joints which have been carefully developed to provide safe, efficient and economical methods of sealing construction gaps.

The bridge expansion joint range of products caters for movements from 20mm through to 330mm and includes the "Britflex BEJ" which is the most popular joint used on motorway and trunk roads throughout the world.

- Rapid on site assembly
- Minimal disruption to traffic
- Perfectly suited for lane by lane installation
- Minimised future maintenance costs
- Easy to install and detail at design stage
- Adaptable to numerous applications
- Excellent global track record
- Unparalleled bond to concrete and steel decks



Movement table:

| | Movement (mm) | | | | | | | | | | | Areas of Use | | | |
|-----------------------|---------------|----|----|------|----|-------|-------|-----|------|------|------|--------------|-----------|-----------|---|
| | 0 | 20 | 40 | 60 | 80 | 100 | 200 | 500 | 1000 | 2000 | Road | Rail | Buildings | Car Parks | |
| Uniflex / Buried | 20mm | | | | | | | | | | ■ | ■ | ■ | | |
| Feba / Asphaltic Plug | 40mm | | | | | | | | | | ■ | | | | |
| Britflex NJ | 50mm | | | | | | | | | | ■ | | ■ | ■ | |
| Britflex BEJ | 150mm | | | | | | | | | | ■ | | | | |
| LJ | | | | | | 220mm | | | | | ■ | ■ | ■ | | |
| Transflex | | | | | | | 330mm | | | | | ■ | | ■ | ■ |
| UCP / Car Park | | | | 75mm | | | | | | | | | | | ■ |

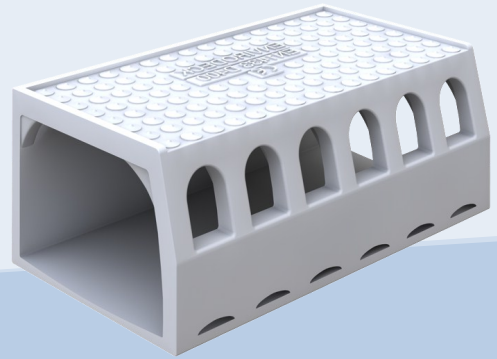
Products - Envirodeck Combined Kerb Bridge Drainage by PDS

Combined kerb drainage units are now widely used and specified on bridge decks whether they are new build or part of a refurbishment scheme. Drainage is an essential requirement on all bridges. Deck mounted systems provide continuous surface & sub surface drainage and easily assessable maintenance.

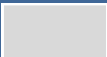
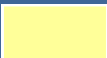



Existing systems are traditionally metallic, which are heavy, raising Health and Safety issues for the installers. Metallic units place additional weight on the structure.

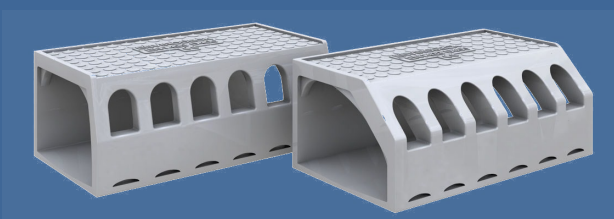
In addition, metallic units are prone to oxidization which can spoil the appearance of a structure, particularly as the systems are a highly visible element of the completed project. This results in on-going expensive maintenance.

- Lightweight non metallic
- Precision manufacturing
- Colour coding options
- Half battered and 45 degree splayed
- New anti slip top surface
- Wide range of widths and depths available
- Fully compliant to BS EN1433
- Surface and subsurface drainage capability



Selection of RAL Colours

| | |
|---|--------------------------|
|  | Light Grey (RAL 7035) |
|  | Buff (RAL 1014) |
|  | Oxide Red (RAL 3009) |
|  | Traffic White (RAL 9016) |
|  | Traffic Black (RAL 9017) |



Features and Benefits

- Units comply with manual handling legislation
- Anti slip surface
- Aesthetically pleasing
- Hydraulics - Produces smooth high quality channel invert
- Chemical resistance
- Impact resistance
- High quality
- Compliant to EN 1433 specification

Global Partnerships

Pitchmastic PmB International have a world-wide network of authorised agents and contractors, providing a representation far beyond our UK base; in North America, the Middle East, Europe and Asia Pacific.

From development and manufacture through to application and beyond, Pitchmastic PmB International possesses all the technical knowledge and support resources to assure the success of the project we are involved in, on a global basis.



Quality Management Procedures

Pitchmastic PmB International is committed to ensuring the successful conclusion of waterproofing and structural protection applications on every project. Our products are manufactured to the highest standards using cutting edge production systems.

Pitchmastic PmB International operates a Quality Management System (QMS) which complies with the requirements of BS EN ISO 9001: 2000 and is regularly audited by BM Trada.

Maintaining Quality Assurance on any site can be challenging. Our unique approach to ensuring the highest on-site QA means the selection and training of Pitchmastic PmB International Authorised Contractors.

Only 'Trained Operatives' within these companies are authorised to apply our products and systems, having undergone intensive theoretical and practical training and on-going on-site auditing to maintain their skill base.



Manufacturing Capability

Pitchmastic PmB International has a wealth of experience in manufacturing specialist construction products. Enjoying an excellent reputation within the industry for quality products, excellent value and exemplary customer service. The companies manufacturing facility processes bitumen, epoxy, polyurethane and acrylic resins together with aggregate and powder blending. The resin facility operates to zone 1 for highly flammable materials.

Pitchmastic PmB International is a quality assured manufacturer which is reflected in the quality of products the company supplies. Fully accredited to internationally recognised Quality Management System ISO 9001:2008, we are able to provide full traceability of product and constantly monitor our processes to ensure that we offer all customers the highest levels of service. Free Certificates of Analysis and Certificates of Conformity are provided where requested and **Pitchmastic PmB International** works closely with all customers to ensure that they receive exactly what they require.



Research and Development

Pitchmastic PmB International takes innovation seriously and believes it is the only way a specialist construction company can stay ahead of the game. That is why **Pitchmastic PmB International** invest resources into their laboratories and material testing facilities, concentrating on the development of ground breaking products to improve effectiveness and efficiency on construction sites across the world.

Pitchmastic's Research and Development is stimulated by the relationships with their customers acting upon specific client requirements, providing timely solutions which provide the backbone of the companies ever expanding product portfolio.



Project Snapshots



Project: Al Sowah Island Infrastructure development



Product: PmB bridge deck waterproofing

Client: Mubadala Main Contractor: Al Naboodah

Project in brief: 252,000m² of PmB spray applied waterproofing to elevated roads, ramps and four bridges over 5.2km of roads. Also irrigation tanks, planters and roofing works.



Project: Sheikh Khalifa Bin Salman Causeway, Bahrain



Product: Britdex MDP waterproofing

Main Contractor: SPMS Contracting

Project in brief: 15,000m² of Britdex MDP waterproofing applied to bridge structure.



Project: Metro Manila Skyway, Singapore



Product: Britflex BEJ

Client: Philippines Highways Department

Main Contractor: Citra Marga

Project in brief: Installation of 414 metres of Britflex BEJ



Project: Rontal Bridge, Lucerne, Switzerland



Product: Kerb and drainage units

Client: Basler & Hofmann

Project in brief: 1500 linear metres of Envirodeck units were supplied to this major project in Switzerland.



Second Severn River Crossing, UK - World Leaders In Structural Protection

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