PITCHMASTIC PmB

Marketed by Tremco CPG in Asia Pacific

TREMCO
Construction Products Group

Pitchmastic PmB
Bridge Deck Waterproofing System

DESCRIPTION
Bridges are under constant attack from environmental issues such as water, chlorides, acid rain, temperature fluctuations, de-icing processes, and freeze-thaw cycles. Extreme weather and the impact of traffic and vibration place bridges under further stresses not inflicted on other structures.

Due to the extent of such attacks, if not adequately protected, the steel reinforcing bars or stressing tendons are liable to corrode and expand. This leads to cracking and spalling of the concrete and an accelerated rate of deterioration to the structure. The costly disruption of the inevitable repair work on rail and highway network impacts both the economy and public safety.

THE SOLUTION
Protect the bridge with a high-quality elastomeric bridge deck protection system Pitchmastic PmB, either at the construction phase to achieve dramatically enhanced life-cycle efficiencies, or as a rehabilitation measure to prevent future water penetration and concrete deterioration.

ADVANTAGES
- Polyurethane (containing no fillers or additives)
- VOC-free
- Exceptional bond strength
- Unrivalled elastomeric capability for superior crack bridging capability
- Abrasion and chemical resistant
- Water vapour and gas permeable
- Resistant to root and microbial attack
- Provides sound insulation
- Rapid cure for rapid return to service

STORAGE
Store material overnight to precondition to between 21 and 27°C prior to use.

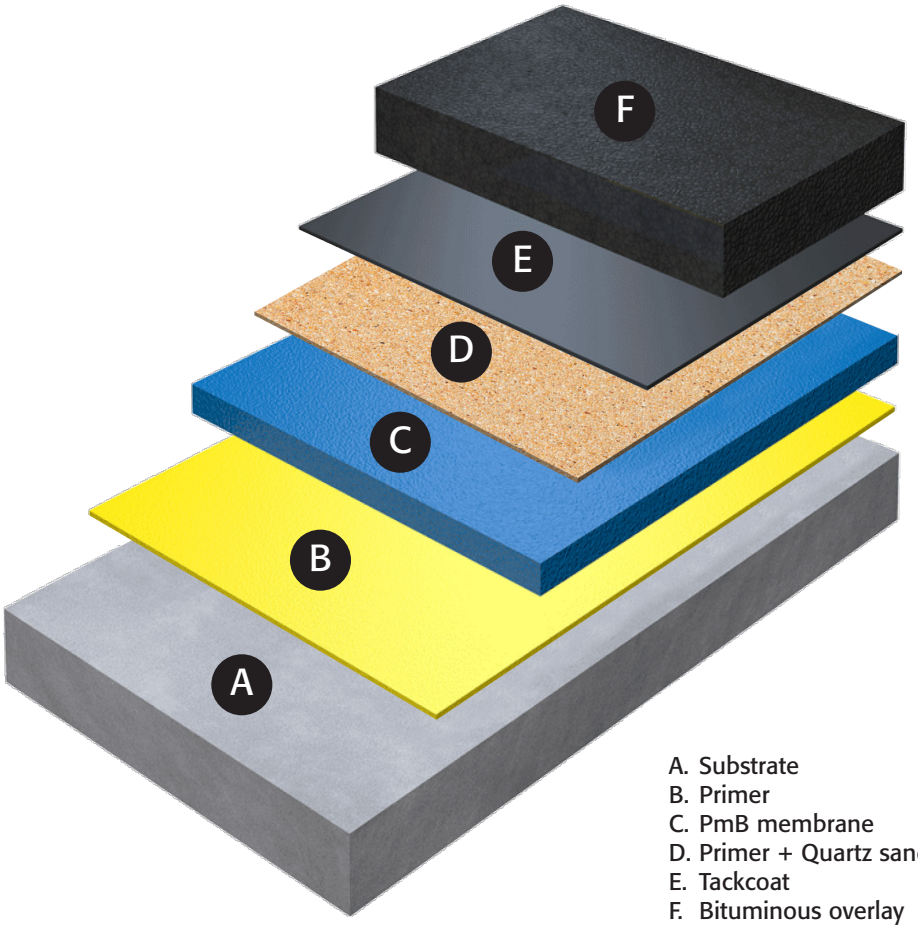
HEALTH & SAFETY
Safety
Safety Glasses, gloves, avoid skin contact, do not ingest, for professional use only, see SDS. For use in well ventilated areas only to keep vapour concentrations low. Use mechanical ventilation if necessary. Use self contained breathing apparatus in confined areas.

First Aid
Eye Contact: Immediately flush with large amounts of water. Seek medical attention. **Inhalation:** Move to fresh air if symptoms occur. If breathing is difficult, seek medical attention. **Ingestion:** Seek medical attention immediately. **Skin Contact:** Wipe off contaminated area and wash with soap and water immediately.

Set Time	5-8 seconds gel time
Tack-free Time	Approximately 1 minute
Walkable	Approximately 10 minutes
Elastomeric	Approximately 45 minutes

SYSTEM BUILDUP

	STEPS	PRODUCTS	PROCESS
A	Surface preparation		Surface to be captive blasted using Autoblast Machine 16 ES or similar to remove all contaminates, loose materials, laitance of any curing membrane residue to enable the adhesion value of 0.75N/mm2.
B	Primer	PMCS/01	▪ Applied to a clean prepared substrate at ambient temperature between 0°C - 35°C and shall not have more than 6% of moisture content. ▪ Primer may be applied by brush, roller or spray at a nominal mist of 40-65 grams per square meter.
C	Body coat	Spray Waterproofing Membrane (PmB 0308 and 0309)	▪ Pitchmastic PmB applied by low pressure spray equipment. ▪ The membrane is applied at a nominal 2.7kg/m2 to achieve minimum film thickness of 2.00mm.
D	Bonding enhancer	Primer PMCS/01 and Quartz Sand	▪ Primer PMCS/01 shall be applied by roller or spray over the cured and tested PmB waterproofing membrane at a nominal coverage rate of 100-150 grams per m2. ▪ 1.0-3.0mm (nominal) Quartz/Silica sand to broadcast onto wet primer typically at 0.7 kg/m2, approximately 60% coverage rate.
E	Tack coat	PM2/02 HC Tackcoat	PM2/02 HC applied by roller, brush or squeegee at a nominal rate of 0.6-0.8 kg/m2
F	Asphalt		By others



A. Substrate
B. Primer
C. PmB membrane
D. Primer + Quartz sand
E. Tackcoat
F. Bituminous overlay

TECHNICAL INFORMATION

PROPERTY	VALUE
Density of spray applied elastomer, DIN 53479 mg/m³	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
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 53516m³ Retention of mechanical properties, torsion modules DIN 53443	160mm³ -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_2 Water Vapour Permeability University of Braunschweig DIN 52615 test report 437/5043-1	Confirmed 486, sd = 1.0m
CO_2 Permeability Englefield U = 64,000 Sd = 15.0m	Confirmed
Water Absorption Coefficient DIN 52617 E	7.6 x 10 - ³kg/m²
Resistance To Chlorides	Resistive
Pull Off / Adhesion To Concrete ASTM D4541 requirement	370 psi
Pull Off / Adhesion To Steel ASTM E96 procedure BW	855 psi
Water Vapour Transmission ASTM E96 procedure BW English units grams /ft / hr no requirements Metric units grams / m² / 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 10³ ohm - cm	91 x 10^6 ohm-cm
Puncture Resistance ASTM test method E154 Requirements 95kgf min	174 kgf

To find your local office address and contact details, visit

www.tremcocpg-asiapacific.com