

## Product Guide

- Seamless Waterproofing Membranes
- Wearing Course Systems
- Concrete Repair, Ironwork Reinstatement & Re-profiling Mortar

### SECTORS



[WWW.MATACRYL.COM](http://WWW.MATACRYL.COM)



**Matacryl® Systems are employed by partners, infrastructure owners and civil engineering experts across the Globe to improve the durability, performance and service life of infrastructure assets.**

Matacryl® PUMA. Formulated for application like an MMA with cured performance superior to a high grade Polyurethane. This unique chemistry prevents the degradation of deck surfaces on new bridges structures and restoration projects.

With hundreds of global installations and decades of deck waterproofing experience, our technical experts can design a solution matched to your project specifications.





26,000m<sup>2</sup> of Matacryn<sup>®</sup> WPM applied to  
Roskilde Fjordforbindelsen Bridge, Denmark



# PERFORMANCE CHARACTERISTICS OF MATACRYL® SYSTEMS

- Monolithic membrane for seamless protection.
- Highly flexible with crack bridging properties at below freezing temperatures; withstands movement and stress in the substrate.
- Excellent chemical, abrasion and puncture resistance to protect bridge substructure against corrosion from waterborne salt and chemicals.
- Tenacious bonding to concrete in excess of concrete tensile and cohesive strength, as well as to steel and other surfaces.
- Unique chemistry that enhances interlayer adhesion, allowing for easy repairs.
- Extreme impact & indentation resistance when tested to AREMA and SNCF Rail standards among other global test methods and norms.
- Full BBA, ASTM & Other International certification.





**45 MINUTES**

Weather resistant and ready to use after completion of application



**-20°C to +35°C**

Installed in a wide range of ambient temperatures to extend the construction season



**100%**

Solid reactive resin content

## KEY FEATURES OF A MATACRYL® SYSTEM INSTALLATION

- Available in spray and manually applied grades to meet job site conditions.
- Rapid curing time promotes fast installation, lower labour costs and far quicker handover to next construction phase.
- VOC compliant; contains no solvents.
- Chemically inert; does not require hazmat precautions for disposal once cured.
- No heating or conditioning of resins or special application equipment required.
- Matacryn® systems are only installed by authorised and approved Partner Applicators.



**Matacryn® Systems are engineered solutions for infrastructure segments including the spanning of bridges, tunnels and highway sectors**



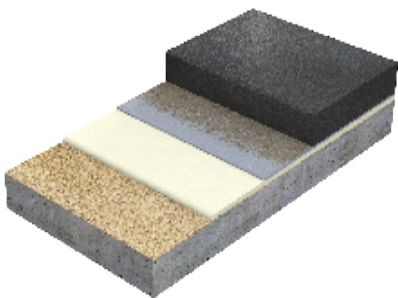
# SECTORS - HIGHWAY BRIDGES



Bridges are exposed to severe stress, their lifetime depends on a variety of factors including: bridge design, concrete/steel quality, physical exposure, chemical exposure, climatic conditions and frequency and quality of maintenance. Matacril bridge deck waterproofing systems address these issues and provide good quality 100% effective seamless waterproofing preventing water, chlorides and de-icing salts from penetrating into the structural deck concrete – thus preventing the steel reinforcing bars corroding.

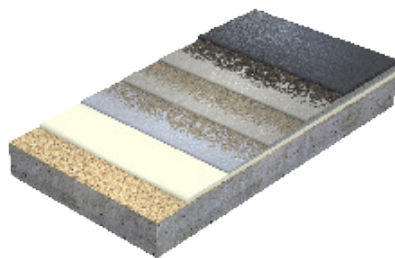
Matacril® have three main bridge deck waterproofing systems offering design engineers and clients effective solutions for the main application areas of bridge deck waterproofing, and when combined with Matacril®'s extensive portfolio for bridges and excellent customer service this gives a class leading offer for all your bridge protection needs.

## Solutions



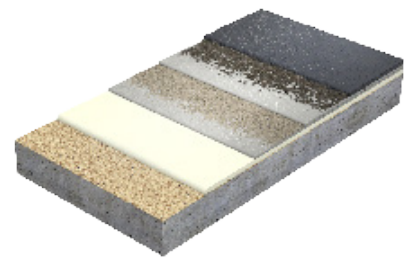
**Matacril® WPM**

P. 10-11



**Matacril® WS (Vehicular)**

P. 12-13



**Matacril® WS (Pedestrian)**

P. 14-15



# SECTORS - RAIL BRIDGES & STATIONS

Matacryl® has long been a key partner to the international rail industry, helping to meet the industry's demands for performance, reliability, efficiency and network availability. We offer Matacryl® RB waterproofing, to over ground and underground stations and rail bridges as well as Matacryl WS (Pedestrian) for wearing surfaces & ramps & access points etc.

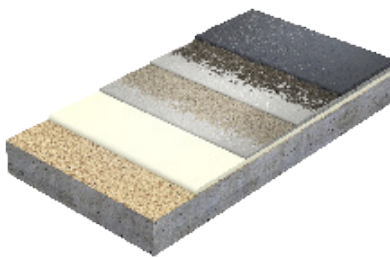
Matacryl® RB has played a key role on projects such as Union Street Station and Black Creek Bridge, Toronto – giving us recognition for quality, reliability and durability of our rail waterproofing solution.

## Solutions



**Matacryl® RB**

P. 16-17



**Matacryl® WS (Pedestrian)** P. 14-15



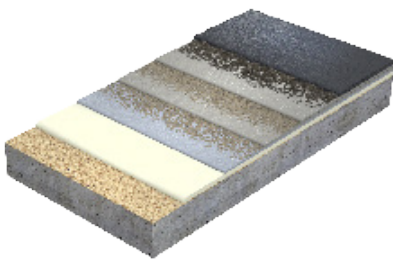
# SECTORS - TUNNELS



Matacril® WS (Vehicular) systems can be used both on the driving surface of tunnels and to protect the tunnel structure from ingress of water and chemicals.

Matacril® WS (Vehicular) surface provides a durable wearing layer for skid resistance inside, and at entry and exit points. A waterproofing system utilising Matacril membrane is based on the tunnel structure and material type.

## Solution



Matacril® WS (Vehicular) P.12-13



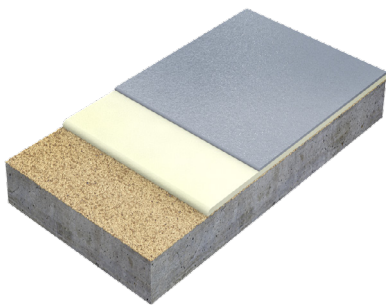
# SECTORS - UTILITIES



The physical integrity of structures within the utilities industry depends largely upon the protection of steel reinforcement from corrosion, and the erosion of concrete due to chemicals and abrasion.

Pumacrete® plays a major role in the waterproofing and protection of concrete against chemical attacks, joint-leaks, cracks and corrosion.

## Solution



Pumacrete®

P. 18-19





The Matacryl® WPM system bonds with the substrate and asphalt overlay to enhance and extend bridge service life.

A second bitumen-based tack coat layer may be used when required by specification or when recommended by the Manufacturer. Matacryl® WPM can be used on new bridge construction, routine maintenance or bridge rehabilitation where uneven or irregular surface profiles exist.



## KEY PROJECTS

- Roskilde Fjordforbindelsen Bridge, Denmark
- Dartford Tunnel, UK
- Welford Bridge, UK
- Chieveley Bridge, UK
- Ponte De Luise Bridge, Portugal
- Pacific Highway Bridges, Australia
- Trung Hoa Interchange Tunnel, Vietnam



Installed in over 20 countries globally

## CASE STUDY: PMB BRIDGE

Client: Government of Brunei  
Location: Muara, Brunei  
Area: 60,000m<sup>2</sup> (646,000ft<sup>2</sup>)

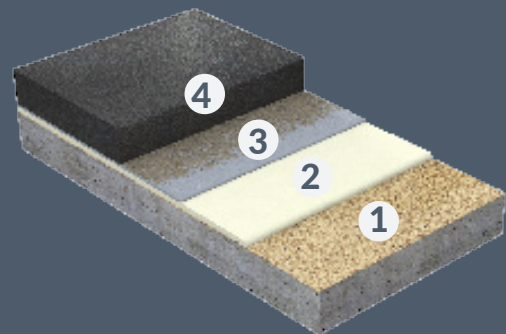
## SOLUTION

The bridge measures a total of 2.6km and 23m wide, making a grand total of 60,000m<sup>2</sup> of wearing surface. Matacryn® WPM was used to waterproof the entire bridge deck in 21 days.

## MATACRYL® WPM SYSTEM BUILD UP: FIGURE 1

1. Matacryn® Primer CM on substrate
2. Matacryn® Membrane Layer
3. Matacryn® STC Tack Coat Layer
4. Asphalt Wearing Course

### FIGURE 1





Safety and durability are key for vehicular bridges & tunnels.

Matacryl® WS bonds with the substrate and provides a sealed waterproofing & wearing course in combination with a flexible, crack bridging barrier membrane for skid resistance and long surface life. It can be used on new bridge and tunnel construction, routine maintenance or bridge restoration applications.

**“Advanced seamless waterproofing membranes and wearing course system”**

## KEY PROJECTS

- Alfred Nobel Bridge, Denmark
- Atamyrat Bridge, Turkmenistan
- Po River Bridge, Italy
- Lawrence Station, Canada
- Bryggebroen Bridge, Denmark



Over 300 projects supplied globally

## CASE STUDY: INTERSTATE 84

Client: Utah Department of Transportation  
Location: Ogden, Utah, USA  
Area: 800m<sup>2</sup> (8,600ft<sup>2</sup>)

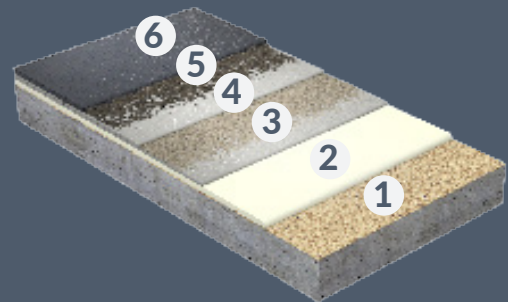
## SOLUTION

Interstate 84 bears significant high-speed, heavy-weight traffic. Matacryn® WS for vehicular systems provides an extremely durable wear surface that withstands the extreme temperatures of Utah's summers and winters.

## MATACRYL® WS SYSTEM BUILD UP: FIGURE 2

1. Matacryn® Primer CM on substrate
2. Matacryn® Membrane Layer
3. Matacryn® Primer & natural quartz
4. Matacryn® WL or WLW Wearing Layer
5. Aggregate, Bauxite / Aluminium Oxide
6. Matacryn® STC Sealer

## FIGURE 2





Safety and durability are key for pedestrian & cycle bridges.

Matacryl®WS bonds with the substrate and provides a sealed wear layer in combination with a flexible, crack-bridging barrier membrane and surface friction suited for walking and cycling. It can be used on new bridge construction, routine maintenance or bridge restoration applications.

**“Advanced seamless waterproofing membranes and wearing course system”**

## KEY PROJECTS

- Five Oaks Footbridge, UK
- Cobden Footbridge, UK
- Orestad Pedestrian Cycle Bridge, Denmark
- Alfred Nobel Bridge, Denmark
- Unwin Bridge, Canada



Installed throughout Europe and North America

## CASE STUDY: HILLSIDE BRIDGE

Client: Cuyahoga Valley Bridge Park  
 Location: Cleveland, Ohio  
 Area: 200m<sup>2</sup> (2,150ft<sup>2</sup>)

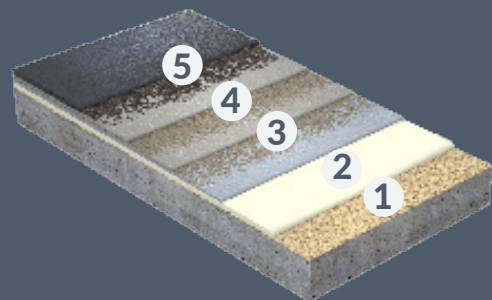
## SOLUTION

When the structural steel deteriorated faster than expected, the U.S National Park Service restored the Hillside Bridge with the Matacryl WS system over pre-fabricated fiberglass panels. The popular foot bridge connects a train station and the Canal Exploration Centre in the park.

## MATACRYL® WS SYSTEM BUILD UP: FIGURE 3

1. Matacryl® Primer CM on substrate
2. Matacryl® Membrane Layer
3. Matacryl® WL or WLV Wearing Layer
4. Aggregate, Bauxite / Aluminium Oxide
5. Matacryl® STC Sealer

## FIGURE 3



Hillside Bridge, Ohio, USA



# MATACRYL® RB SEAMLESS WATERPROOFING FOR RAIL BRIDGES & STATIONS

Matacryl® RB provides seamless waterproofing and extreme impact & indentation resistance under rail ballast.

When required by specification, a proprietary ballast mat is placed in conjunction with Matacryl® RB Adhesive to seamlessly bond the mat and the waterproofing system. Matacryl RB can be used with new construction, restoration or replacement rail bridge and grade separation applications. The Matacryl RB membrane may also be used without protection board.



## KEY PROJECTS

- Dennison Road Grade Separation, Canada
  - Union Station, Canada
- Georgetown Bridge over Credit River, Canada
- Local Traffic Railway Bridge, Sweden
- Viaduc de la Rocade Rail Bridge, France



Used in Europe,  
North America  
& Asia



## CASE STUDY: BLACK CREEK BRIDGE

Client: Metrolinx  
Location: Toronto, Ontario, Canada  
Area: 600m<sup>2</sup> (6,500ft<sup>2</sup>)

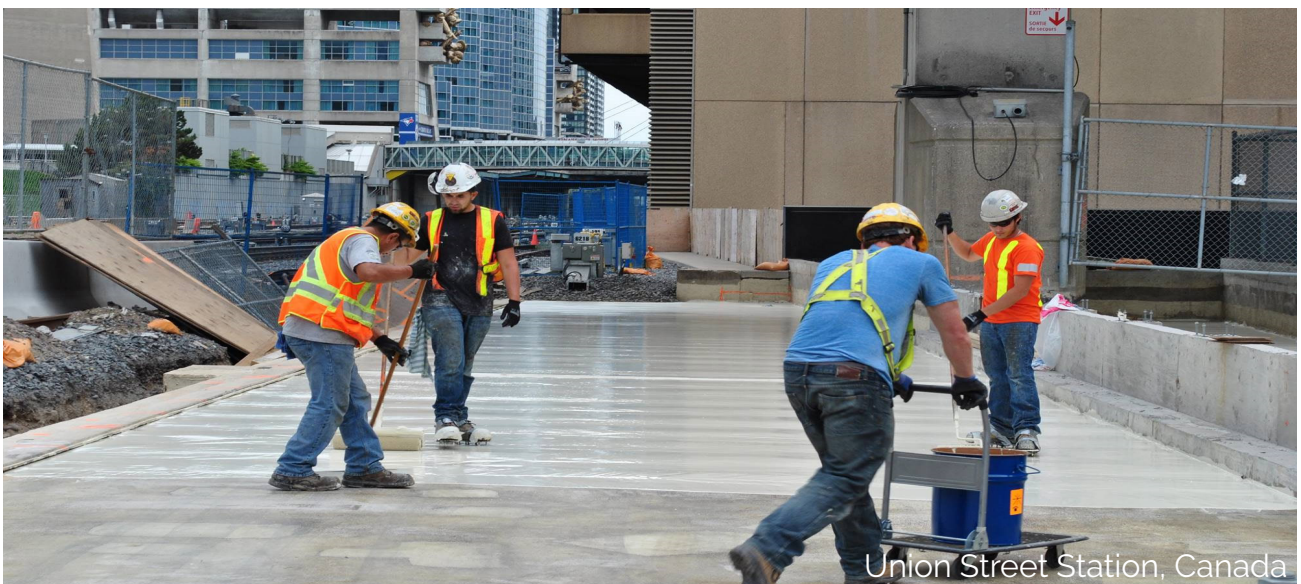
## SOLUTION

Union Street is Toronto's busiest railway station and international hub. As part of \$640 million revitalisation project, passenger platforms, elevated entry and egress bridges, and rail track surfaces were renovated and waterproofed with Matacryl RB.

## MATACRYL® RB SYSTEM BUILD UP FIGURE 4

1. Matacryl® Primer CM on substrate
2. Matacryl® Membrane Layer
3. Matacryl® STC Tack Coat Layer (optional)

## FIGURE 4





# PUMACRETE®

## A HIGHLY ELASTIC HEAVY DUTY MANUAL OR SPRAY APPLIED 100% SEAMLESS GAS & LIQUID PROOF MEMBRANE

Pumacrete® is a two-part liquid applied polymer membrane system, based on Urethane-Modified Acrylic Monomers (PUMA technology), and is used as a waterproof membrane for concrete structures, and for internally and externally applied tanking below and above ground.

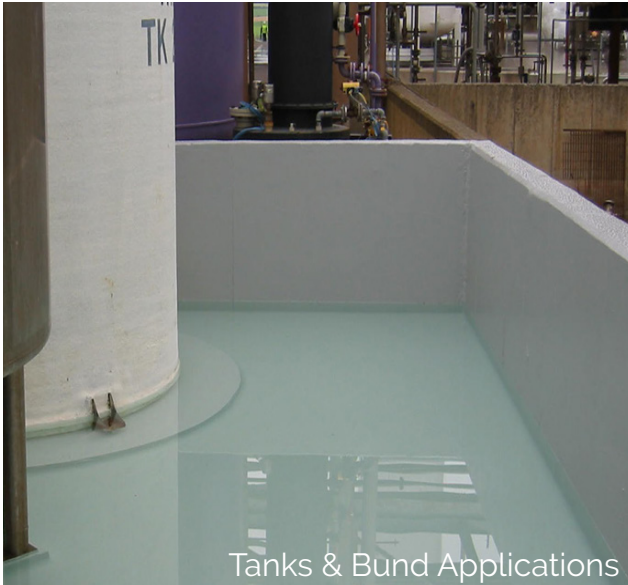


### APPLICATIONS

- Substructures and basements
- Storage for Chemical Plants
  - Lift Pits
- Secondary Containment
- Waste Water Reservoirs
  - Plant Rooms
  - Feeding Silos
  - Bio Fermenters



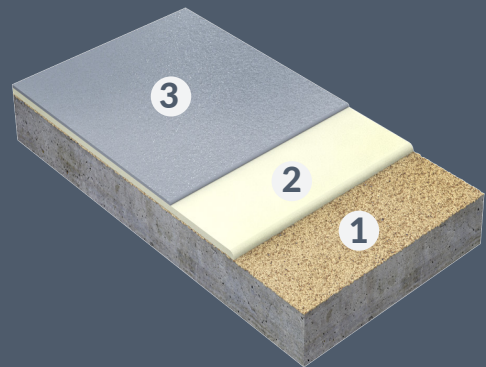
Highly flexible with excellent crack bridging capabilities



## PUMACRETE® BUILD UP FIGURE 5

1. Pumacrete® Primer CM on substrate
2. Pumacrete® Membrane Layer
3. Pumacrete® STC Sealer  
(Where necessary)

### FIGURE 5





# MATACRYL® READY REP IRONTEC RAPID CURING FLOWABLE CONCRETE REPAIR, IRONWORK REINSTATEMENT & RE-PROFILING MORTAR

Matacryl® Ready Rep Irontec is used on infrastructure applications including surface restoration, ironwork reinstatement and anchoring or setting of steel components.

Fast curing and non-sensitive to extreme temperatures, Matacryl Ready Rep Irontec is preferred by applicators, structure owners, and civil engineers for new construction and restoration projects. Matacryl Ready Rep Irontec is corrosion inhibiting and provides long term dimensional stability.



## KEY PROJECTS

- Oxford Street, London
- Gatwick Airport, London
- Victoria Station Roads, London



Ideal for sensitive environments and prestigious locations

Note: Our Matacrete Concrete Repair Range is also available to complement Matacryl & Pumacrete projects where required.

## CASE STUDY: PARLIAMENT SQUARE

Client: Transport for London,  
City of Westminster and CVU  
Contractor: Techjoint Limited  
Location: London, England, UK

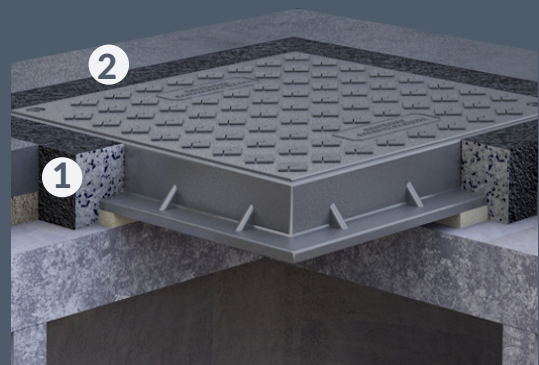
## SOLUTION

To replace 156 manholes on one of the most high profile roads in and around Parliament Square, to ensure longevity and minimise future disruption. All works completed in 12 shifts by UK exclusive partner Techjoint Limited.

## MATACRYL READY REP IRONTEC BUILD UP FIGURE 7

1. MATACRYL® READY REP IRONTEC
2. Bauxite anti-skid surfacing

## FIGURE 7





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