

Product Guide

- Seamless Waterproofing Membranes
- Wearing Course Systems
- Ironwork Reinstatement

SECTORS



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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.





26,000m² of Matacryl® 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, and highway sectors

SECTORS - HIGHWAY BRIDGES

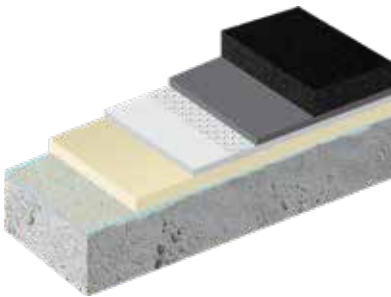


Bridges are exposed to severe stress, their lifetime depends on a variety of factors including: bridge design, concrete/steel quality, physical exposure, chemical exposure, climatic conditions and frequency and quality of maintenance. Matacryl® bridge deck waterproofing systems address these issues and 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.

Matacryl® also effectively protect the concrete matrix within the deck from water activated long term durability concerns such as Delayed Ettringite Formation (DEF), Alkali Silica Reaction (ASR) or any other Chemical Attacks.

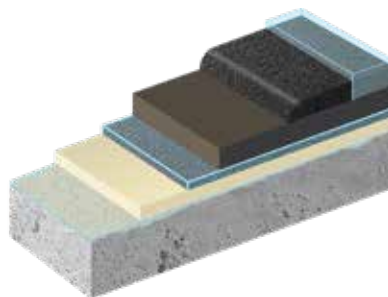
Matacryl® have three main bridge deck waterproofing systems offering design engineers and clients effective solutions for the main application areas of bridge deck waterproofing, and when combined with Matacryl®'s extensive portfolio for bridges and excellent customer service this gives a class leading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

Solutions



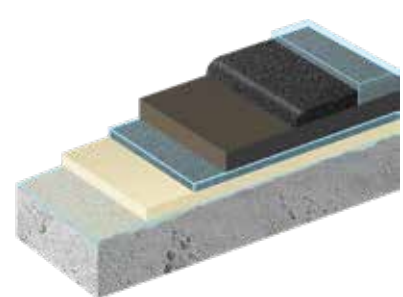
Matacryl® WPM

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Matacryl® WS (Vehicular)

P. 12-13



Matacryl® WS (Pedestrian)

P. 14-15

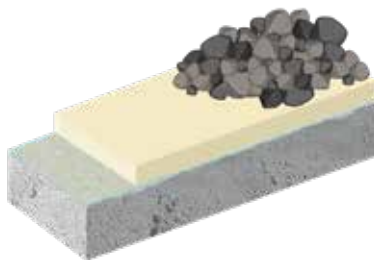
SECTORS - RAIL BRIDGES & STATIONS



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

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MATACRYL® SYSTEMS

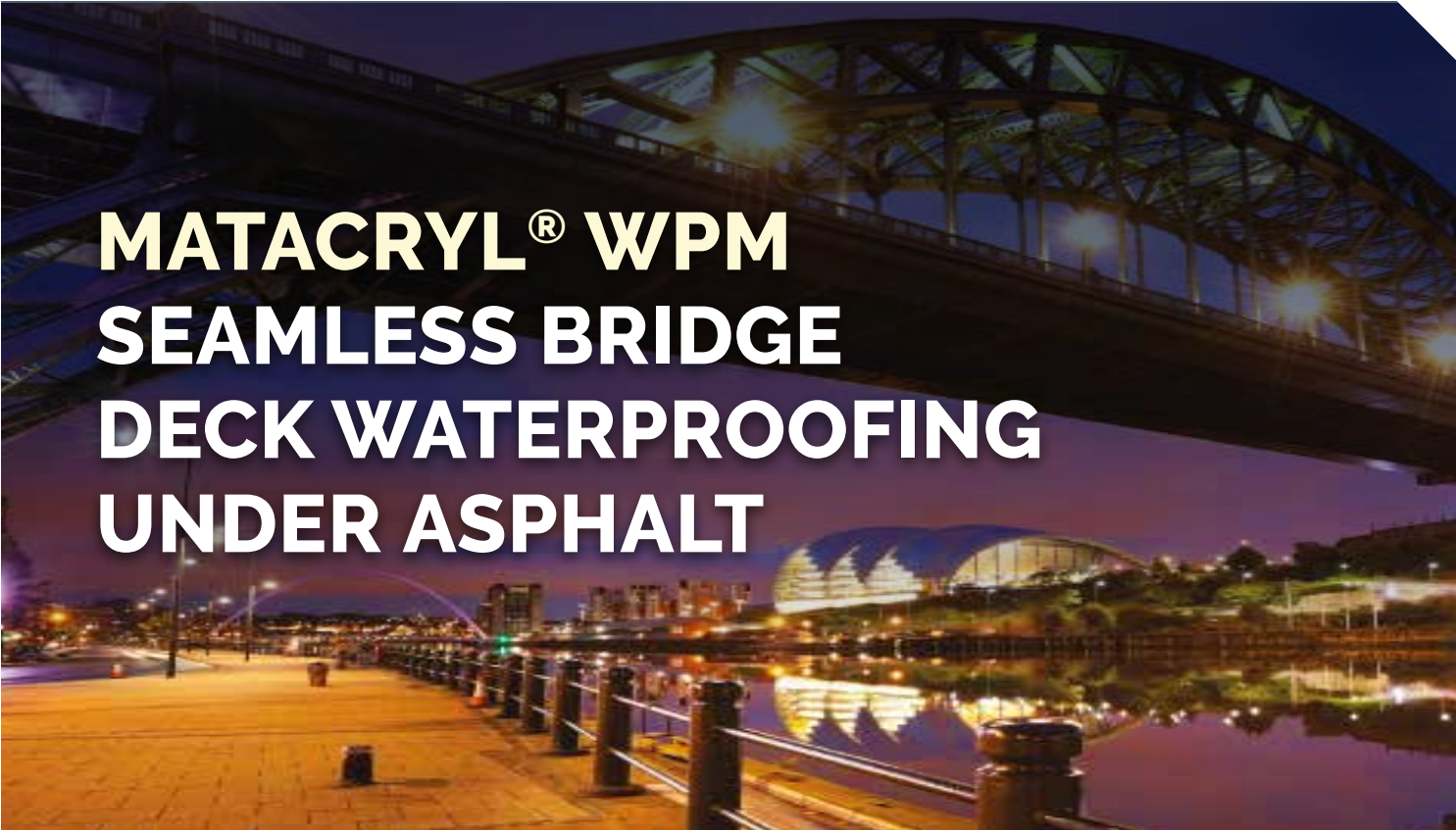
- MATACRYL® WPM
- MATACRYL® WS
- MATACRYL® RB
- MATACRYL® READY REP IRONTEC





The benefits of using Matacryn[®] WS system on the bridge deck:

- Dramatic reductions in weights, almost 95% of total weight of wearing layer
- 7-10% reduction in reinforcement steel requirements for superstructures
- Expected life of Matacryn[®] WS is typically double of asphalt or concrete WC under same conditions
- Time & weather constraints are less relevant
- Very limited repairs
- Extremely cost effective



MATACRYL® WPM SEAMLESS BRIDGE DECK WATERPROOFING UNDER ASPHALT

The Matacryn® 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. Matacryn® 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: PULAU MUARA BESAR BRIDGE

Client: Government of Brunei
Location: Pulau Muara Besar, Brunei
Area: 60,000m² (646,000ft²)

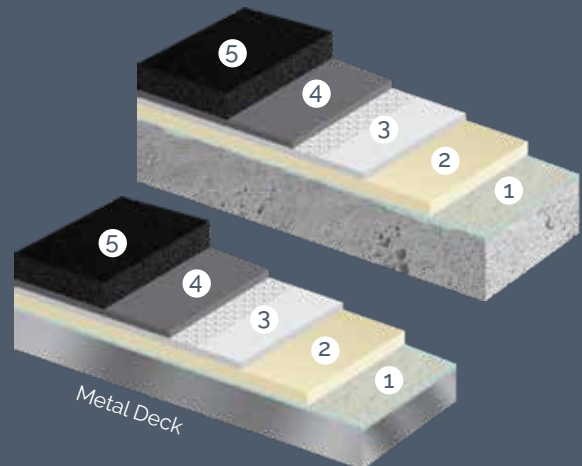
SOLUTION

The bridge measures a total of 2.6km and 23m wide, making a grand total of 60,000m² of wearing surface. Matacryl® WPM was used to waterproof the entire bridge deck in 21 days.

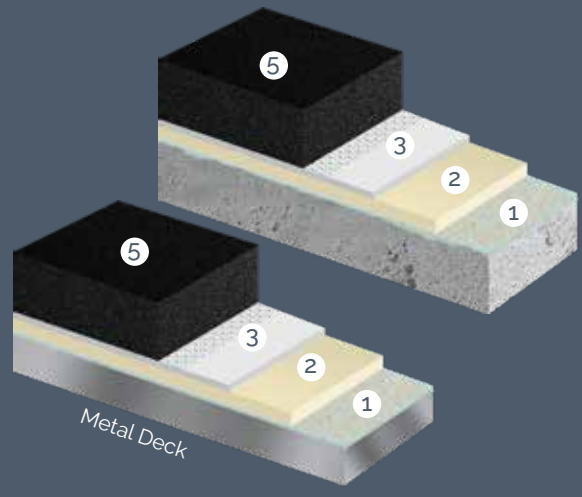
MATACRYL® WPM SYSTEM BUILD UP: FIGURE 1

1. Matacryl® Primer CM + Quartz Sand on substrate
2. Matacryl® Membrane Layer
3. Matacryl® STC + Quartz Aggregate
4. Matacryl Tack Coat No. 1
(Bituminous Tack Coat for Thin Asphalt <100mm)
5. Asphalt Wearing Course

FIGURE 1 - Thin Asphalt < 100 mm



Thick Asphalt > 100 mm





MATACRYL® WS (VEHICULAR) SEAMLESS WATERPROOFING & WEARING COURSES FOR ROADS & BRIDGES

Safety and durability are key for vehicular bridges

Matacryl® WS (Vehicular) provides a durable wearing layer for skid resistance together with a robust PUMA based waterproofing system to protect bridge decks from ingress of water and chemicals. It replaces traditional asphalt wearing course with an extremely tenacious, yet flexible PUMA based thin wearing layer. This results into significant reduction in the dead-weight of the wearing course with minimal maintenance translating into substantial cost savings during the construction and throughout its service life.

"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: 800m² (8,600ft²)

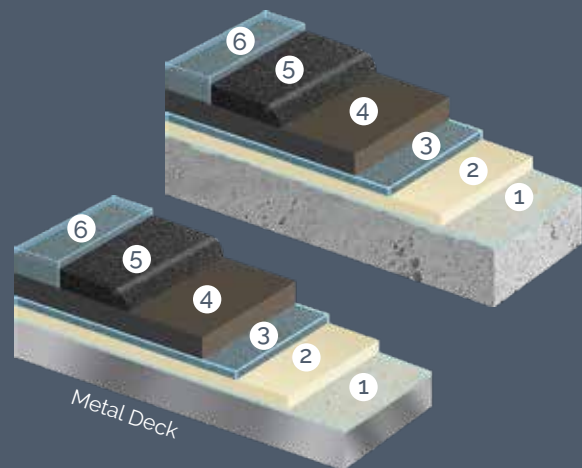
SOLUTION

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

MATACRYL® WS (VEHICULAR) SYSTEM BUILD UP: FIGURE 2

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

FIGURE 2





MATACRYL® WS (PEDESTRIAN) SEAMLESS WATERPROOFING & WEARING COURSES FOR PEDESTRIAN & CYCLE BRIDGES

Safety and durability are key for pedestrian & cycle bridges.

Matacryn® 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.

KEY PROJECTS

“Advanced seamless waterproofing membranes and wearing course system”

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

installed throughout the world.

CASE STUDY: HILLSIDE BRIDGE

Client: Cuyahoga Valley Bridge Park
 Location: Cleveland, Ohio
 Area: 200m² (2,150ft²)

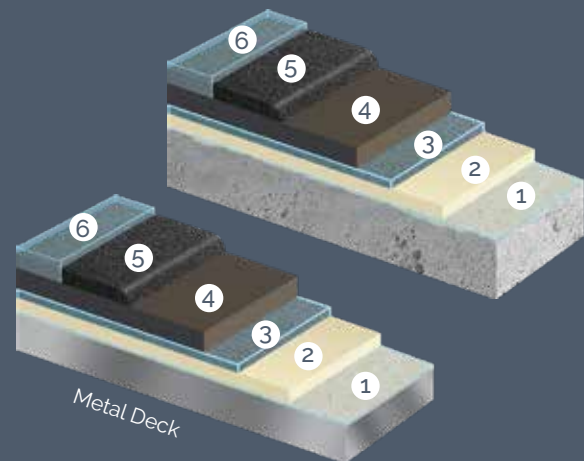
SOLUTION

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

MATACRYL® WS (PEDESTRIAN) SYSTEM BUILD UP: FIGURE 3

1. Matacryn® Primer CM + Quartz Sand on substrate
2. Matacryn® Membrane Layer
3. Matacryn® Primer CM + Bauxite
4. Matacryn® WL + SNL Filler
5. Aggregate, Bauxite / Aluminium Oxide
6. Matacryn® STC Sealer

FIGURE 3



MATACRYL® Bridge Deck Wearing Course



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 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: 600m² (6,500ft²)

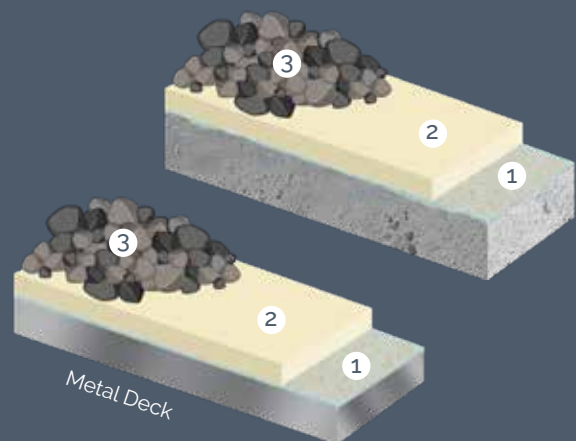
SOLUTION

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 + Quartz Sand on substrate
2. Matacryl® Membrane Layer
3. Rail Ballast

FIGURE 4



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

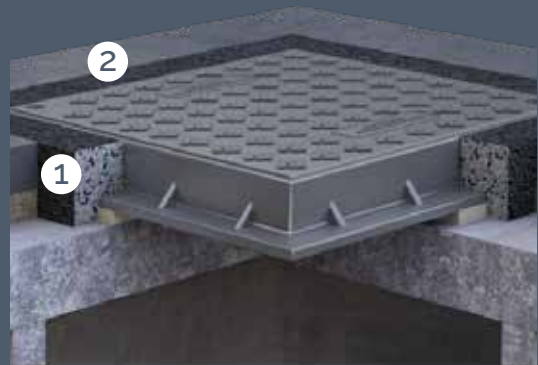
SOLUTION

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 5

1. Matacryn® Ready Rep Irontec
2. Bauxite anti-skid surfacing

FIGURE 5





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