



Matacryl WPM

PRODUCTS & SYSTEMS GUIDE

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INTRODUCTION TO MATACRYL

Matacryn Bridge Deck Waterproofing Systems are utilised globally by leading infrastructure owners, civil engineering experts and partners to enhance the structural performance, durability, and service life of critical infrastructure assets.

The core of this system is the specialised Matacryn PUMA formulation, which is a unique, advanced chemistry blending Methyl Methacrylate (MMA) and polyurethane. This combination creates a highly flexible, rapid-setting, and exceptionally durable membrane.

This state-of-the-art solution reliably prevents the long-term degradation of both steel and concrete elements on new builds as well as complex restoration projects.



SYSTEM OVERVIEW

Matacryn WPM is a seamless liquid-applied waterproofing membrane system engineered specifically for bridge decks protected by asphalt wearing courses.

It provides long-term waterproofing and corrosion protection for reinforced concrete and steel bridge decks used in new construction, maintenance and rehabilitation projects.

The system is compatible with both thick (>80 mm) and thin (<80 mm) asphalt wearing layers, enabling engineers to select the appropriate system configuration to suit project requirements and department specifications.

By forming a fully bonded waterproofing membrane beneath the asphalt layer, Matacryn WPM prevents the ingress of water, chlorides and other aggressive substances that contribute to reinforcement corrosion and premature deterioration, helping extend the service life of critical transport infrastructure.

Developed for demanding infrastructure environments, Matacryn WPM combines proven waterproofing performance with compliance to key Australian transport authority requirements.

FEATURES & BENEFITS

Cold Applied

Application requires no heating or conditioning equipment, simplifying logistics regardless of ambient parameters.

Extreme Temperature Range

Can be installed at ambient and substrate temperatures ranging from -20 °C to +35 °C, effectively extending the construction season year-round across all Australian climate zones.

Rapid Set Time

The system cures quickly to reduce road possession times, minimise labour costs and allow rapid handover for subsequent construction phases.

Weather and Rain Resistance

Fully weather resistant and ready for use just 60 minutes after application, even when exposed to rain or other inclement weather.

Excellent Crack Bridging

Highly flexible membrane capable of bridging severe cracks, offering elongation capabilities exceeding conventional resin systems by more than 300%.

High Bond Strength

Delivers shear and tensile bond values that far exceed standard international requirements, adhering to concrete, steel, and asphalt wearing layers.

Environmentally Profiled

Solvent-free, VOC compliant, chemically inert, and requires no special HAZMAT precautions for disposal once fully cured.

Extended Longevity

Acts as a major performance contributor in bridge applications, aligned with the Austroads 100 Year Design Life Philosophy.



SYSTEM BUILD-UP

The system build-up below details the specification for applications featuring an asphalt overlay thicker than 80 mm. A system build-up for applications featuring an asphalt layer less than 80 mm is also available (not shown here).

WATERPROOFING MEMBRANE UNDER ASPHALT

MATACRYL® WPM >80 MM

	Layer	Material	Application Rate	Thickness
1	Primer on substrate ¹ broadcast aggregate	Matacryn Primer H or CM Quartz 30/60	0.3 to 0.5 kg/m² 0.3 kg/m²	
2	Membrane ² (1 or 2 layers)	Matacryn Manual or Thix³	Minimum 2.8 kg/m²	2.0 mm
3	Topcoat broadcast aggregate	Matacryn STC Quartz 3 mm	0.7 to 1.0 kg/m² 2.5 – 3.0 kg/m²	50% coverage

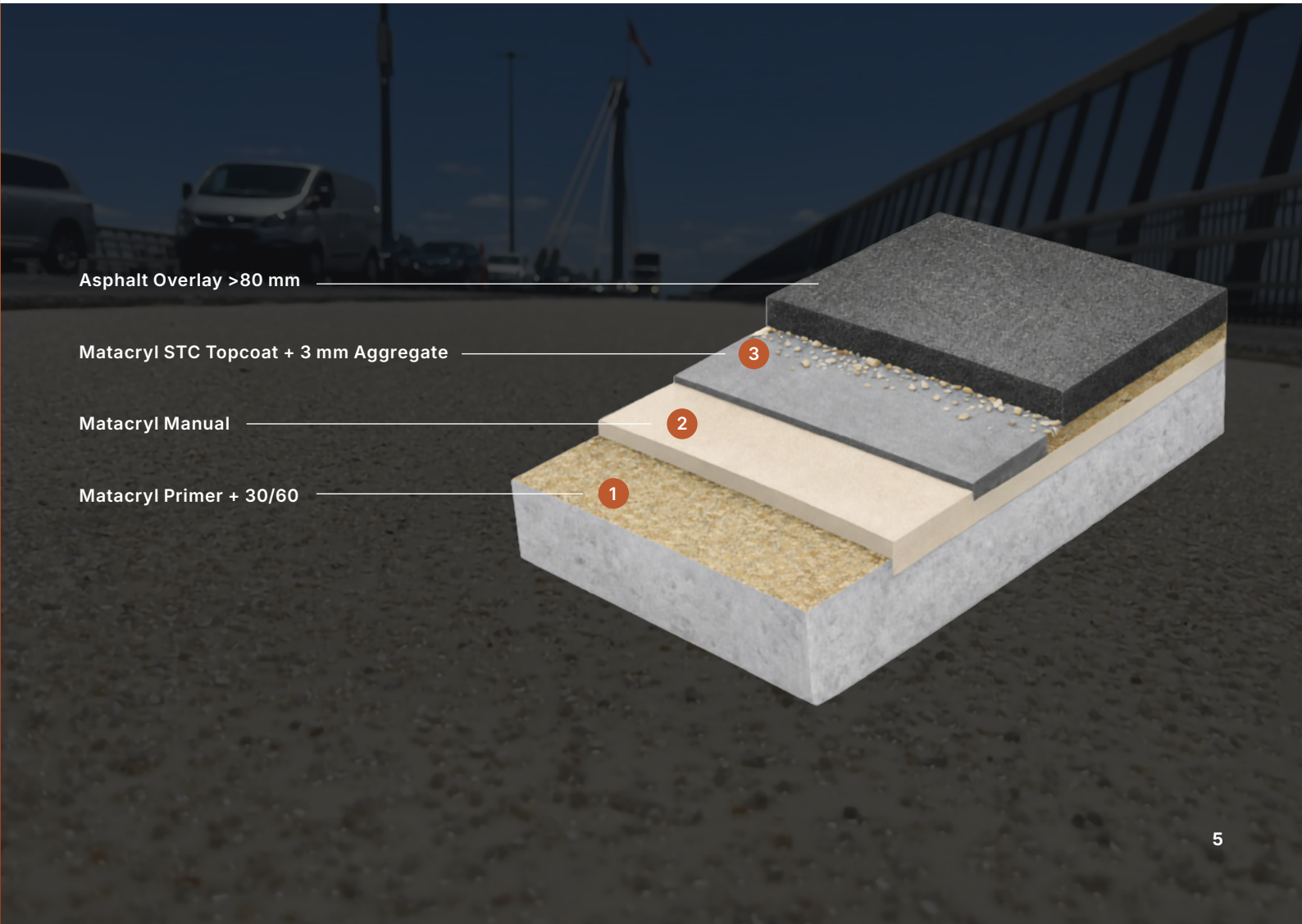
¹ Porous or uneven substrates may require multiple primer coats
² Membrane application rate / thickness: Minimum 2.8 kg/m² for single layer
³ Matacryn Thix is only required for vertical surfaces



TYPICAL APPLICATIONS

Matacryn WPM is specifically engineered for the following primary structural asset exposures across Australia:

- Waterproofing of concrete decks configured with thick asphalt wearing layers (>80 mm thick).
- Waterproofing of concrete decks configured with thin section asphalt wearing layers (<80 mm thick).
- Waterproofing and corrosion inhibition of standard steel bridge decks at variable asphalt thicknesses.
- New bridge infrastructure builds, routine deck maintenance, and rapid bridge rehabilitation projects.



At Hychem Infrastructure, compliance is the foundation of performance.

APPROVALS & COMPLIANCE

Matacryl WPM meets strict global benchmarks and holds key local infrastructure approvals, ensuring complete compliance with tight department specifications:

- Austroads ATS5350-20 Waterproofing of Concrete Bridge Decks.
- Transport for NSW (TfNSW): TS 01621 TfNSW Proprietary Components and Systems Register for Bridgeworks, TS 00082 Waterproofing of Concrete Bridge Decks.
- Victoria Department of Transport / VicRoads: Approved under Section 691.
- British Board of Agreement (BBA): HAPAS Certified.
- Certified in accordance with ASTM and European KIWA standard methodologies.



CASE STUDY

Pacific Complete W2B
(Woolgoolga to Ballina, NSW)

Hychem Infrastructure supplied the Matacryl WPM bridge deck waterproofing system for the Pacific Complete Woolgoolga to Ballina highway upgrade in northern New South Wales, helping deliver long-term waterproofing and corrosion protection across 49 bridges.

Client
Transport for NSW (TfNSW) and Pacific Complete

Location
Northern New South Wales

Challenge
The Woolgoolga to Ballina (W2B) upgrade on the Pacific Highway eliminated a notoriously dangerous, crash-prone stretch of road while also reducing travel times for freight and motorists. Due to large traffic volumes, the extensive bridge structure required a waterproofing and protection system that would hold up to high daily loads.

Solution
Matacryl WPM was selected to waterproof and protect 49 individual bridge structures measuring a total of 24,000 sqm. The system was successfully applied directly beneath a thin 60 mm asphalt wearing layer, meeting the high shear and tensile bond demands required by modern thin-section asphalt specifications.

Outcome
The project formed part of the final link in the Pacific Highway upgrade, one of Australia's largest regional road infrastructure projects, improving safety and reliability between Sydney and Brisbane.

Products
Matacryl® WPM System



Your trusted partner in infrastructure protection

Partner with Hychem Infrastructure, where decades of product and engineering experience come together to protect Australia's infrastructure for generations to come.

OUR LOCATIONS

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