



# EQUUS MATACRYL PEDESTRIAN DECK SYSTEM

Standard Building Consent Package



CELEBRATING  
**40** YEARS  
1982–2022

AUGUST 2024

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# Specification

WATERTIGHT TECHNOLOGY

COATINGS & SILICATE SYSTEMS

FLOORING TECHNOLOGY

## Standard Specification for the application of Matacryn Pedestrian Deck waterproofing system to concrete surfaces

Project:  
Prepared for:  
Specification:  
Date: September 2023  
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### 1.0 PREAMBLE:

This specification is for the application of the **Matacryn Pedestrian Deck System** to waterproof concrete surfaces such as balconies, decks, ramps and walkways. Designed as easy maintenance with an integrated non-skid surface profile for foot traffic, the waterproofing system also cures very quickly meaning minimal disruption and downtime for the building owner. The system is also available in a range of decorative coloured quartz aggregates to give an attractive aesthetically pleasing finish. The specification also deals with preparation of the surfaces before the application of the waterproofing system.

The **Matacryn Pedestrian Deck System** is a multi-layer system. It comprises of a medium viscosity, urethane-modified, pre-reacted 100% solid liquid membrane system, which is based on acrylic monomers.

### 2.0 SURFACE PREPARATION:

#### 2.1 General Responsibility:

Unless expressly agreed otherwise at time of contract pricing, all work in this section shall be the responsibility of the Main Contractor, whether carried out by his own staff, other sub-trades or the Specialist Finishes Sub-Contractor. In the latter case, such preparatory work shall be priced separately from work defined in Sections 3.0 - 6.0 inclusive.

#### 2.2 Mosskilling Treatment: (If required)

All surfaces shall be treated with **Equus Mosskill** solution to kill all moss/mould spores and growths. Stipulated kill-times shall be observed.

**Note:** Badly affected surfaces may require treatment before and after waterblast cleaning to ensure full kill is achieved before coating application.

#### 2.3 Concrete Preparation:

The substrate must be dry, firm, solid and free of residues of laitance, dust, grease, oil and other contaminants before coating. In case of serious oil contaminations, acetylene flame cleaning, followed by mechanical treatment, is required. Do not use solvents as a cleaning agent. Their use will drive fat/oil further into concrete compromising the adhesion of the **Matacryn Pedestrian Deck System** membrane to the concrete.

The concrete must be cured for a minimum of 28 days. The cohesive strength of the concrete substrate must be greater than 1.5 N/mm<sup>2</sup> in average value. This can be checked by undertaking a pull-off test if required in accordance with:

**ASTM C1583 Standard Test Method for Tensile Strength of Concrete Surfaces and the Bond Strength or Tensile Strength of Concrete Repair and Overlay Materials by Direct Tension – Pull-off Method.**



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The concrete substrate shall be prepared with suitable methods such as diamond grinding or captive shot blasting. The surface must be cleaned with an industrial vacuum cleaner after treatment. The final prepared surface profile shall be CSP2, as defined in:

**ICRI Guideline No. 310.2R-1997, Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays and Concrete Repair.**

For new concrete floors, good water curing under polythene is recommended. Liquid or spray applied concrete curing compounds shall not be used.

The humidity on the surface of the concrete must not exceed 4% and the substrate temperature should be at least 3°C above the dew point at the time of application. Do not apply when atmospheric condensation is occurring or likely to occur before full system cure is obtained.

**Note: Contact Equus Industries Ltd for a further preparation methodology if required prior to any coating work.**

## 3.0 SURFACE PRETREATMENT:

### 3.1 Cracks:

Shrinkage cracks in the concrete surface which are 1 mm wide or greater shall be routed out to a minimum of 6 mm wide by 10 mm deep before treatment. Mix **Matacryl Manual LM** in accordance with the Manufacturer's instructions and pour into the crack after the primer has been applied.

All hairline cracks and untreated cracks up to 1mm wide shall be stripe coated with a 150mm wide application of **Matacryl Manual** or **Matacryl Thix** applied at a spreading rate of 1kg per m<sup>2</sup>. Embed 80mm wide **Equus Joint Tape** into the wet **Matacryl Manual** or **Matacryl Thix** to reinforce the area if required. This shall be done after priming.

### 3.2 Concrete Imperfections:

Concrete defects, voids or irregularities shall be rectified with **Ready Rep** Mortar after priming with **Matacryl 108 H Primer**.

## 4.0 MATACRYL PEDESTRIAN DECK SYSTEM APPLICATION:

All MMA and PMMA liquid components of the system (primer, bodycoat, wearcoat, topcoat) shall be mixed and catalysed with Duracon Catalyst before use as per the Manufacturer's instructions. The percentage of catalyst added is dependent on atmospheric conditions (heat, cold, humidity) at the time of application.

**The components cure rapidly so mix only what can be used within the stated timeframe.**

### 4.1 Primer: Concrete

Apply suitably-catalysed **Matacryl 108 H Primer** to the concrete surface at a spreading rate of 0.3 - 0.5 kg per m<sup>2</sup> to obtain a continuous resin film. The spreading rate will depend on the surface porosity of the concrete. Broadcast **Walton Park 18/36** aggregate onto the wet surface to provide a key for the subsequent coating at a spreading rate of 0.3kg/m<sup>2</sup>. Allow to cure for 45 – 60 minutes, depending on site conditions and percentage (%) of Catalyst added.

### 4.2 Primer: (Metal or Plastic Surfaces):

Apply suitably-catalysed **Matacryl 107 CM Primer** to metal surfaces at a spreading rate of 0.2 kg per m<sup>2</sup> to obtain a continuous resin film. Allow to cure for 45 – 60 minutes, depending on site conditions and percentage (%) of Catalyst added.



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### 4.3 Membrane Application: (Upstands, Sumps and Edges)

Apply one (1) coat of suitably catalysed **Matacryn Thix** at a spreading rate of 2 kg per m<sup>2</sup>. Use a coving trowel or similar to round out the transition between horizontal and vertical planes on upstands. Ensure there is sufficient material at this critical junction to create a fillet of 10mm x 10mm dimension to provide a bridge for the subsequent wear layer. The waterproofing membrane shall be brought up 200 mm on horizontal/vertical transitions and turned down 150 mm on leading edges. Allow to cure for 45 – 60 minutes, depending on site conditions and percentage (%) of Catalyst added.

### 4.4 Membrane Application:

Apply one (1) coat of suitably catalysed **Matacryn Manual** to the primed surfaces at a spreading rate of 2 kg per m<sup>2</sup>. Apply using a notched trowel or squeegee and then spike roll. Allow 45 – 60 minutes to cure, depending on site conditions and percentage (%) of Catalyst added.

### 4.5 Coving: (Decorative Quartz)

Prior to use **Matacryn BFK** must be carefully stirred to achieve a uniform distribution of the paraffin contained in the product.

**Matacryn BFK** is thoroughly mixed together with catalyst in accordance with site conditions. After the catalyst has been stirred in, then the aggregate shall be added and stirred in at a ratio of 1kg **Matacryn BFK resin** to 3-4 kg selected coloured quartz. Immediately after mixing, the material shall be applied and smoothed out with a coving trowel. This process is carried out before the application of the Wear Layer.

### 4.6 Wear Layer: (Decorative Quartz)

Mix **Matacryn 215 WL** with **SNL Aggregate** in a ratio of 1 to 1 by weight with catalyst as per mixing instructions. Pour onto substrate, spread out to 1.5 kg per m<sup>2</sup>. Apply this coat by notched trowel or squeegee and then spike roll. Broadcast 0.7 – 1.2mm coloured quartz into the wet resin at 3 - 4 kg per m<sup>2</sup> to excess. Allow 45 – 60 minutes to cure, depending on site conditions and % of Catalyst added. Sweep up and/or vacuum excess quartz and recycle for later use.

### 4.7 Topcoat Application: (Painted Finish)

Apply one (1) coat of suitably-catalysed **Matacryn STC** at a rate of 0.2 kg per m<sup>2</sup>. Allow to cure for 45 – 60 minutes, depending on site conditions and percentage (%) of Catalyst added.

**Note:** For a non-slip finish, broadcast **Walton Park 18/36** aggregate into the wet resin at 1.5 kg per m<sup>2</sup> to excess. Allow 45 – 60 minutes to cure, depending on site conditions and % of Catalyst added. Sweep up and/or vacuum excess quartz and recycle for later use.

Apply a second coat of **Matacryn STC** at a rate of 0.3 kg per m<sup>2</sup> to fully encapsulate the non-skid aggregate. Allow to cure for 45 – 60 minutes, depending on site conditions and percentage (%) of Catalyst added.

### 4.8 Topcoat Application: (Decorative Quartz)

#### Protected Areas – Infrequent UV Exposure

Apply suitably catalysed **Matacryn 319** clear topcoat to achieve a spreading rate of 0.5 kg per m<sup>2</sup>. Allow to cure for 45 – 60 minutes, depending on site conditions and % of catalyst added.

Apply a second coat of **Matacryn 319** clear topcoat to achieve a spreading rate of 0.2 kg per m<sup>2</sup>. Allow to cure for 45 – 60 minutes, depending on site conditions and % of catalyst added.

### 4.9 Topcoat Application: (Decorative Quartz)

#### Exterior:

Apply by roller or squeegee, one (1) coat of **Matacryn 2K FG** at a spreading rate of 4-5 kg/m<sup>2</sup>.



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Allow to cure approximately 2-3 hours depending on site conditions.

Apply by roller or squeegee one (1) further coat of **Matacryl 2K FG** at 4-5 kg/m<sup>2</sup> and allow to cure for 24 hours before placing in service.

### 4.10 Procedures:

Ensure that at all times all work is carried out in accordance with procedures published by **Equus Industries Ltd** for the **Matacryl Pedestrian Deck System**.

### 4.11 Quality Assurance (QA)

The Equus Certified Applicator is responsible for onsite **QA**. The Equus project checklists outlining the required processes shall be completed and signed as each stage of installation is completed. Photographs of each stage shall be taken and submitted as part of the overall **QA**. A Warranty will not be issued unless a copy of the documentation has been filed with Equus Industries Ltd. Third party QA documentation is acceptable provided it is equivalent to the Equus issued QA.

## 5.0 CONSTRUCTION JOINTS:

All construction and expansion joints formed in the floor base must be carried through the **Matacryl Pedestrian Deck System** to the deck surface.

All construction and expansion joints shall be prepared and primed with **Matacryl 108 H Primer** (suitably catalysed) and must be filled with an oversized backing rod correctly placed and filled with **Matacryl Manual LM** (always respecting the 2:1 width-to-depth ratio of the joint design).

## 6.0 PENETRATIONS:

If any penetrations are made through the finished **Matacryl Pedestrian Deck System**, all holes for fixings or anchors shall be filled with **Tremco Dymonic FC** (PU sealant) prior to the installation of the penetration. Half screw the fixings and leave the sealant to cure for at least 6 hours. Finish the screwing process after this so that the sealant will act as a gasket to prevent water ingress around the fixing.

## 7.0 MAINTENANCE AND WARRANTY:

### 7.1 Maintenance:

Should the system be damaged at any time by undue mechanical force or excessive building movement and/or wear, the surface shall be repaired using compatible materials applied in accordance with a repair methodology issued by Equus Industries Ltd.

The **Matacryl Pedestrian Deck System** can be washed down at any stage using a neutral detergent and soft surging with a low-pressure water wash.

### 7.2 Warranty:

The **Matacryl Pedestrian Deck System** may be warranted for a period of up to ten (10) years from the date the application is completed.

Such warranty is issued by the Approved Equus Applicator carrying out the work, and is backed by the manufacturer as to the suitability for use of the materials supplied, provided that:

- .1 All specified work is carried out by a Certified Equus Applicator.



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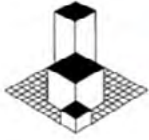
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- .2 All work is carried out in accordance with this specification or any written amendments thereto issued by the manufacturer.
- .3 A yearly inspection of the **Matacryl Pedestrian Deck System** is carried out and any damaged areas are repaired.
- .4 Special conditions are applied where service conditions involve severe mechanical abrasion / impact or chemical spillage or both.
- .5 The warranty does not cover cracking to the system caused by substrate movement.

The area is subject to usage conditions described to Equus Industries Ltd. and the Approved Applicator at the time the work is done, and those conditions remain for the term of the Warranty.

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WATERTIGHT TECHNOLOGY COATINGS & SILICATE SYSTEMS FLOORING TECHNOLOGY



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## MATACRYL MEMBRANE SYSTEM

### NZ Building Code Compliance Technical Report

#### Executive Summary

This report presents an analysis of the properties of the Matacryn Membrane system and its compliance with the New Zealand Building Code when used as an external membrane for waterproofing decks, concrete roof areas, walkways, bridge decks, podiums and carparks, including above a habitable space.

## **Background**

Matacril is supplied to the NZ construction market for use as a waterproofing membrane. The analysis in this report reviews information provided by the manufacturer and presents it to support the manufacturer's evidence of compliance with the New Zealand Building Code.

It is intended to facilitate decision-making by a BCA when considering a building consent application.

### ***What is the Matacril Membrane system***

The Matacril Membrane system is a waterproofing membrane, applied over new or existing roof and deck substrates, such as concrete, in residential and commercial buildings, where a trafficable surface such as tiles and the like are installed over the top of the membrane. It can also be used directly as a trafficable surface by pedestrians and vehicles.

It consists of the following components.....

- Duracon 108 primer (porous surfaces) or Duracon 107 primer (non-porous surfaces)
- Matacril LM
- Matacril Thix
- Matacril Manual
- Duracon 307 or Duracon 319 Topcoats (when required)
- Duracon 2K FG Clear Topcoat (when required)
- Walton-Park 18/36 aggregate
- Duracon 215 bodycoat (when required)
- Matacril STC Topcoat (when required)

Matacril® products (Matacril® Manual, Matacril® Thix and Matacril® LM) are urethane-modified pre-reacted 100% solid membrane systems based on acrylic monomers, formulated with a range of viscosities. Curing is initiated by the addition of Matacril® Catalyst.

Duracon products are low viscosity multi-component reactive resins based on methyl methacrylate (MMA), used as primers and sealers on porous substrates.

Duracon 2K FG Clear Topcoat is a UV-stable two component aliphatic polyurethane overglaze for application over mineral aggregate floor surfaces.

Other components may be used as required to prepare the substrate or to provide for subsequent covering:

- Equus Ready Rep (repair mortar)
- ASO®-EZ6 Rapid Screed
- Textile AFM (a decoupling mat)
- Graded calcined Bauxite
- Coloured Quartz aggregate

## Analysis

### *What are the applicable Building Code clauses?*

The following code clauses are applicable to the use of the Matacryn Membrane system used as described above (see Appendix 1 for details of how these clauses are applicable):

B2 Durability – B2.3.1 (a)\*, B2.3.1 (b), B2.3.2\*

D1 Access Routes – D1.3.3(e)

E2 External Moisture – E2.3.1 (contributes to), E2.3.2, E2.3.6, E2.3.7

F2 Hazardous building materials – F2.3.1

(\* where difficult to access or replace e.g. where protected by tiles or screed)

### *How does the Matacryn Membrane system comply with the performance requirements of the NZ Building Code?*

B2 Durability

#### **B2.3.1 (a), B2.3.1 (b), B2.3.2**

The Matacryn Membrane system is outside the scope of Acceptable Solution B2/AS1.

Verification Method B2/AS1 provides for the verification of durability by proof of performance, taking into account the expected service conditions by one or more of the following:

- a) In-service history,
- b) Laboratory testing,
- c) Comparable performance of similar building elements.

The expected service conditions are dominated by resistance to immersion in water (if used in a directly trafficable application without protection) or exposure to UV and mechanical damage (if not protected).

The Matacryn (One Coat) Bridge Deck waterproofing system has been reviewed and a certificate issued by the BBA Agrément Board<sup>1</sup>. A bridge deck is particularly demanding for durability, as water contaminated by de-icing salts must be prevented from penetrating the bridge deck (where it would lead to corrosion of reinforcing steel). The design life of a bridge structure is typically in excess of 100 years. The BBA HAPAS certificate concluded that “provided the installed system is not damaged during subsequent resurfacing, it will provide an effective waterproof layer to the concrete bridge deck”.

Tests conducted in support of the BBA Agrément certification included:

- tensile adhesion at –10°C, 23°C and 40°C
- resistance to chloride ion penetration
- resistance to freeze/thaw
- resistance heat ageing
- resistance to chisel impact
- resistance to aggregate indentation at 40°C, 80°C and 125°C
- resistance to thermal shock, heat ageing and crack cycling

- tensile adhesion to 7-day-old concrete substrate
- tensile adhesion of overlaps after 6 months
- shear adhesion of HRA surfacing to waterproofing system interface
- tensile bond strength of HRA surfacing to waterproofing surfacing system interface.
- tensile adhesion on tamped and timber formed surface finish of concrete substrate
- tensile adhesion of system installation at –5°C on concrete substrate.

Resistance to immersion in water is evidenced by the resistance to chloride ion penetration reported by the BBA HAPAS certification and by EXOVA<sup>2</sup>.

Resistance to UV has been tested<sup>10, 11</sup> by assessment of colour change, hardness and tensile properties following accelerated exposure to UV radiation, with only negligible variations after UV exposure.

Enhanced resistance to UV when the membrane is exposed to sunlight is provided by Duracon 307. Silica sand added to the Matacryl and/or Duracon 307 to provide slip and wear resistance provide further protection from UV.

#### D1 Access Routes

The Matacryl Membrane system may be used in applications where it provides a trafficable surface for pedestrian access. Wet slip resistance of Matacryl with the addition of silica sand to the priming coat and wear resisting layer has been tested<sup>9</sup> by pendulum testing in accordance with BS 812. This exceeds the wet slip resistance required by Acceptable Solution D1/AS1.

Duracon has been tested in-situ by Opus<sup>12</sup> to AS/NZS 3661.1:1993 and found to have a mean wet coefficient of friction of 0.69, compared with a minimum required of 0.4.

#### E2 External Moisture

The Matacryl Membrane system is outside the scope of materials included in Acceptable Solution E2/AS1. A first principles approach, and comparison of relevant attributes with other products accepted in practice is taken below.

##### **E2.3.1**

MBIE Determination 2016/016<sup>3</sup> found that a nominally flat, or zero pitched roof, can provide for precipitated water to be shed, and comply with E2.3.1. It noted that the scope of E2/AS1 is limited to particular materials, not applicable to the Matacryl Membrane system. It noted also that the Code of Practice for Torch-on Membrane Systems for Roofs and Decks<sup>4</sup> provides for dialogue between the designer and supplier. In other words, the limits of fall are not absolute.

It noted that is possible, and realistic to expect, that a notionally flat roof structure could in practice have low points in which water would pond, but took the view that this is appropriately considered as a matter for compliance with E2.3.7(b), because such low points reflect construction tolerances, and are not a deliberate design to accumulate water.

The Matacryn Membrane system does not present any barrier to the shedding of precipitated water from the roof, even at nominally zero pitch, and therefore contributes to compliance with E2.3.1.

### **E2.3.2**

The dominant considerations for E2.3.2 are resistance to water, and water vapour transmission.

The water vapour transmission, or permeability, has been tested and reported. For Matacryn Manual:  $1.11 \times 10^{-11} \text{ kg}/(\text{m}^2 \cdot \text{s} \cdot \text{Pa})^5$ . For comparison, this is similar to, or better than, other roof and deck membrane waterproofing products ( $2 \times 10^{-10} \text{ kg}/(\text{m}^2 \cdot \text{s} \cdot \text{Pa})$ ), or tanking materials ( $10^{-11} \text{ kg}/(\text{m}^2 \cdot \text{s} \cdot \text{Pa})$ ).

Resistance to water pressure has been tested<sup>5</sup>, with the membrane subjected to an applied pressure of 5 bars (500 kPa) for 72 hours, with zero water penetration through membrane.

The mechanical properties have been tested and reported<sup>7</sup>.

The membrane has excellent adhesion to concrete (rupture within the concrete), good hardness (85 IRHD), ability to bridge cracks and excellent elongation at breaking (145%). The elongation at breaking can be compared with other well accepted roofing membrane products (elastomeric sheet approx. 400%, or torch-on bituminous membrane approx. 40%).

The membrane also has excellent crack bridging properties. Testing by Kiwa<sup>8</sup> with the following results: “after testing no cracks were detected in the waterproofing membrane”.

### **E2.3.7**

The waterproof membrane being fully adherent to the underlying concrete or timber roof substrate minimises the passage of moisture should the membrane itself fail to resist penetration by moisture, which provides for E2.3.7(a) being met.

In considering E2.3.7(b) there is a possibility of unintended ponding of water at low points on a nominally flat deck as a consequence of normal construction tolerances.

When this is considered in the context of the functional requirement (clause E2.2) to provide adequate resistance to penetration and the accumulation of moisture from the outside, then provided the water resistance integrity of the membrane is not compromised then the functional requirement does not depend absolutely on precipitated water being shed.

The Matacryn Membrane system has been shown to resist the passage of water when tested at pressures up to 5 bar (500 kPa) for 72 hours. It is also used as for a range of applications where it could be subjected to long term or permanent hydrostatic water pressure e.g. sub-grade waterproofing of Buildings and Civil Engineering Structures, and protection and waterproofing of Tunnels, Channels and Dam structures. It follows that the membrane would provide sufficient resistance to water that might pond in localised low points, and therefore would satisfy E2.3.7(b).

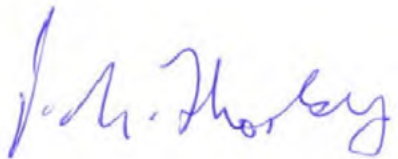
Tensile bond strength of the system applied to wet concrete tested after XX days<sup>9</sup> resulted in cohesive failure in the concrete. It can be concluded that the system is tolerant of application to concrete when it is not completely dry.

#### F2 Hazardous building Materials

The Matacryl Membrane system has no components<sup>13</sup> giving rise to harmful concentrations at the surface of the material where the material is exposed (notwithstanding the material is not exposed) nor in the atmosphere of any space. The resins are two-component resins which cure by a polymerisation reaction to produce an inert thermoset plastic with negligible residual reactivity.

#### Conclusions

The Matacryl Membrane system used as described and installed in accordance with the manufacturer's installation instructions complies with the applicable performance requirements of the NZ Building Code.



P N Thorby

## References

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  - Duracon 205
  - Duracon 215
  - Duracon 307
  - Duracon 319
  - Duracon 2K FG Clear Topcoat
  - Duracon Catalyst
  - Matacryn Manual
  - Matacryn LM
  - Matacryn STC

## **Appendix 1 Code Clause Analysis**

This appendix sets out the analysis of which code clauses are applicable to the use of the Matacryn Membrane system as an external waterproofing membrane.

### **B1 Structure -**

Consideration has been given to B1.3.1, B1.3.2, the applicable physical conditions of B1.3.4, and B1.3.4.

Careful reading of B1.3.2 and B1.3.1 would lead to the conclusion that these are not applicable, because the structural failure of the membrane is not likely to cause injury, nor is the structural behaviour likely to cause loss of amenity. Clauses B1.3.3 and B1.3.4 then become not applicable.

Having said that, and taking a “fitness for purpose” view, the membrane would be unaffected by wind loads and applied loads in service such as those resulting from pedestrian traffic on the membrane, dead loads of say tiles or pavers laid on top etc.

### **B2 Durability –**

If the membrane is uncovered and not difficult to replace the code requirement is B2.3.1(b), fifteen years. If the membrane is covered and difficult to replace the code requirement is 50 years.

There are two typical environments that lead to degradation of a membrane such as this. The first is exposure to UV radiation (sunlight). The second is failure of the product by hydrolysis when continuously immersed in water.

The Matacryn membrane is designed to tolerate both of these environments, and there are correspondingly different code obligations depending on the accessibility of the membrane.

If the membrane is exposed to UV, then typically the membrane would not be difficult to access or replace, and the requirement would be B2.3.1 (b) and the predominant failure would be UV degradation. The possibility of ponding would also need to be considered.

If the membrane is protected from UV, by say tiles or pavers, or having been overlayed by a plaster screed to form falls, then exposure to UV is not applicable, the effect of immersion in water is applicable, and the requirement is B2.3.1 (a).

Where the membrane is difficult to access or replace (such as under tiles or under a screed) then B2.3.2 is also applicable.

### **D1 Access Routes –**

The Matacryn Membrane system can be used to provide a trafficable surface for pedestrians (e.g. decks and walkways) and vehicles (e.g. car parks). An access route (for pedestrians) in buildings is required to have adequate slip-resistant walking surfaces under all conditions of normal use. Specifically. Clause D1.3.3(e) is applicable.

### **E2 External Moisture -**

The primary purpose of the Matacryn Membrane system is to “provide adequate resistance to penetration by, and the accumulation of, moisture from the outside” as required by the functional requirement E2.2.

Looking at each of the E2 clauses:

E2.3.1 Roofs must shed precipitated moisture. In locations subject to snowfalls, roofs must also shed melted snow.

This is a requirement of a roof. It is reasonable to consider a deck in the same context, but in neither case does it explicitly apply to the membrane. Compliance with the clause is achieved by having appropriate roof pitch, which is determined by the substrate and not the membrane. Notwithstanding this, it is reasonable to consider whether the membrane compromises compliance with this clause, and it is now conventional to ascribe a “contributes to” compliance where the product is obviously associated with a user expectation.

E2.3.2 Roofs and exterior walls must prevent the penetration of water that could cause undue dampness, damage to *building elements*, or both.

This clause is functionally directly relevant.

E2.3.3 Walls, floors, and structural elements in contact with, or in close proximity to, the ground must not absorb or transmit moisture in quantities that could cause undue dampness, damage to *building elements*, or both.

This clause is not applicable – the membrane is not a “wall, floor, or structural element in contact with, or in close proximity to, the ground”, nor is it a part of any of those building elements.

E2.3.4 *Building elements* susceptible to damage must be protected from the adverse effects of moisture entering the space below suspended floors.

This clause is not applicable.

E2.3.5 *Concealed spaces* and cavities in *buildings* must be constructed in a way that prevents external moisture being accumulated or transferred and causing condensation, fungal growth, or the degradation of *building elements*.

This clause is not applicable.

E2.3.6 Excess moisture present at the completion of *construction* must be capable of being dissipated without permanent damage to *building elements*.

This clause is not applicable. The membranes do not contain moisture.

E2.3.7 *Building elements* must be constructed in a way that makes due allowance for the following:

- (a) the consequences of failure:
- (b) the effects of uncertainties resulting from *construction* or from the sequence in which different aspects of *construction* occur:
- (c) variation in the properties of materials and in the characteristics of the site.

This clause is applicable. It is effectively a “robustness test” for the product, and tests that the product is robust and can be effectively installed in practice.

## **Appendix 2 Application to Princes Wharf Remediation**

The system specified for the Prices Wharf remediation consists of:

- Matacrl Membrane system applied to prepared concrete deck substrate
- Concrete screed to falls
- Matacrl Membrane system applied to fully cured screed
- Decoupling mat
- Tiles set in full bed waterproof adhesive.

### **Analysis**

The system described is a “belts and braces” approach to ensuring the long-term performance with respect to External Moisture. It is a robust system with multiple layers of defence.

Effectively it provides a double membrane layer, both protected from UV. The top layer could potentially be subject to long term water immersion due to water penetration between tile joints and subsequent migration through the decoupling mat. The Matacrl Membrane system is not affected by water immersion and would continue to provide a barrier to water movement. In the unlikely event that the top layer of Matacrl Membrane system was imperfect, water would then need to migrate through the screed, (which is itself resistant to water migration), and then also penetrate through a second Matacrl Membrane system.

The Matacrl Membrane system has a high degree of extension before failure and is capable of accommodating crack movement in the concrete substrate.

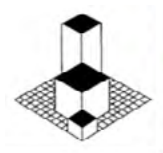
Matacrl Membrane system has a high bond with concrete (even if applied to damp concrete) and is not affected by any applied loads that might occur. Evidence of this is provided by its use (with aggregates) as a trafficable surface for carparking buildings, and as waterproofing for road bridge decks.

The decoupling mat provides for the tiles to be mechanically separated from the weatherproofing membrane and substrate.

The body of this report sets out how the Matacrl Membrane system complies with the relevant performance requirements of the New Zealand Building Code.

### **Conclusion**

The system specified for the Prices Wharf remediation using the Matacrl Membrane system, and installed in accordance with the manufacturer’s instructions, is robust and meets the performance requirements of the New Zealand Building Code



## Tekton Consulting

Tekton Group Ltd, PO Box 45045, Lower Hutt 5042, ph: +64 27 2300120

# Introducing ..... Tekton

## About Tekton

Tekton's mission is to support innovation and growth of the NZ building and construction sector.

Tekton offers consultancy services to the construction, product manufacturing and supply sector and the building regulatory sector.

Tekton specialises in providing technical expertise and building system regulatory knowledge to building product manufacturers and importers to support their obligations regarding product information and product certification, and to Product Certification bodies as an expert input to their decision making about certification of products.

## Tekton's Work

Tekton has a wide range of clients. They include large New Zealand and Australian building product manufacturing corporates, medium and smaller enterprises looking to establish building regulatory credentials for a particular imported building product, and Government agencies.

The following is a snapshot of some key areas of Tekton's work:

### Product Certification (Codemark)

Product certification is a voluntary scheme that provides an easily understood and robust way to show that a building product meets the requirements of the New Zealand Building Code (the Building Code).

Tekton works with accredited "product certification bodies", as their technical expert or regulatory advisor, or with applicants assisting them with the preparation of their application for certification of their product.

### Product Technical Statements

Section 14 of the (New Zealand) Building Act sets out the responsibilities of the various parties with respect to building work. Section 14G requires product manufacturers or suppliers to be able to support their claims that their product complies with the New Zealand Building Code.

A Product Technical Statement (PTS) is a recommended way of meeting this obligation. A PTS is a statement made by a product manufacturer (or supplier) stating which performance requirements of the building code the product complies

with, and any caveats or limitations to the use of the product that affect its code compliance.

Tekton works with product manufacturers to prepare and publish product technical statements.

### Pre-Manufactured Building Components

Interest in componentised construction continues to increase, and ranges from small prefabricated assemblies through to complete dwellings, often manufactured offshore. Meeting regulatory obligations for some componentised systems, particularly manufactured offshore, can be quite different from conventional “on-site” construction.

Tekton can assist in this area and works with clients to establish evidence of compliance with the New Zealand Building Code.

### Introducing Peter Thorby

Peter Thorby is the sole shareholder-employee of Tekton. He has an extensive track record of engagement with the building and construction sector. He has a detailed knowledge of the Building Code, and the building regulatory system, in particular the setting of regulatory standards, the development of compliance solutions, and the consenting of building work.

Peter has a background in materials and building science research and consultancy, maintenance management policy, and building standards regulatory policy development.

Building on his Master of Engineering degree (in Chemical and Materials Engineering) he has spent 40 years in the building and construction sector.

He has led teams of technical and professional experts in the performance of building materials and the development of regulatory standards and compliance solutions.

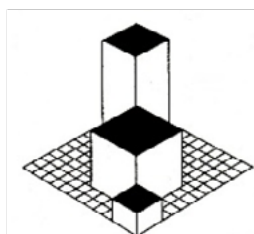
Prior to establishing Tekton in 2014 he held employment at the Ministry of Business, Innovation and Employment (and its predecessor Department of Building and Housing) as the Manager of the Building Standards Group. In that role he was responsible for the development and maintenance of the New Zealand Building Code, Verification Methods, Acceptable Solutions and guidance issued under S175 of the Building Act. He was the inaugural manager of the National Multiple Use Approvals (MultiProof) group.

Immediately prior to that he led a three-year review of the New Zealand Building Code (required by the Building Act 2004). The report of that review was presented to the government in 2007, and its recommendations have informed subsequent amendments to the Building Code and associated supporting documents and guidance.

Peter provides technical and/or regulatory support to all the currently accredited Product Certification Bodies. Peter also provided technical and/or regulatory support to AsureQuality before that organisation made a business decision to discontinue providing Codemark certifications.

### Employment Experience

Building Materials research and consultancy	<ul style="list-style-type: none"> <li>Research Scientist, Pottery and Ceramics Research Association</li> <li>Building Science Section Head, MWD Central Laboratories</li> <li>Tekton Consulting</li> </ul>
Construction sector engagement	<ul style="list-style-type: none"> <li>Technical Development Manager, Housing New Zealand Ltd</li> <li>Business Development Manager, Opus Central Laboratories</li> <li>Manager Building Code Review, MBIE</li> <li>Manager Building Standards, MBIE</li> <li>Tekton Consulting</li> </ul>
Building Code policy	<ul style="list-style-type: none"> <li>Manager Building Code Review, MBIE</li> <li>Manager Building Standards, MBIE</li> </ul>
Product compliance support	<ul style="list-style-type: none"> <li>Building Science Section Head, MWD Central Laboratories</li> <li>Tekton Consulting</li> </ul>



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PO Box 45 045, Lower Hutt 5042

**Tekton Consulting**

Company Name	Tekton Group Limited
Company Number	432962
NZBN	9429039327451
Date of Incorporation	May 1989
Postal Address	PO Box 45045, Lower Hutt, New Zealand 5042
Office Location	Wellington

Note: The Company was incorporated under the Companies Act 1955 as Thorby Building Consultants Limited in May 1989 and renamed Tekton Group Limited in November 1992. It was reregistered to become a company under the Companies Act 1993 on 1 July 1997.

Tekton Group Limited uses its brand Tekton Consulting (often simply shortened to "Tekton").

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TQD006\_Tekton Profile

Date: 28 Sept 2020

Revision: R2.1

Status: Issued

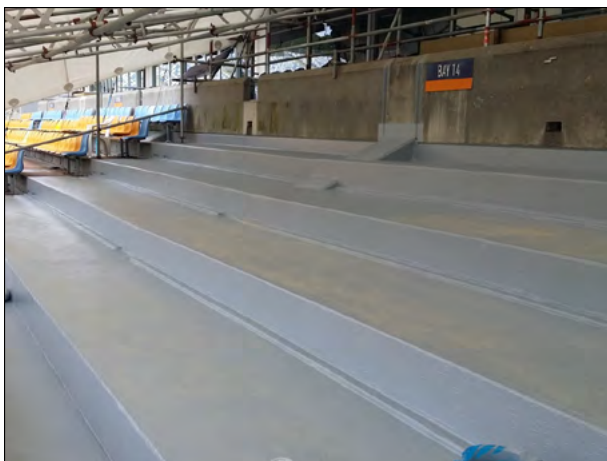
## EQUUS PRODUCT SYSTEM REFERENCE SHEET



Substrate preparation



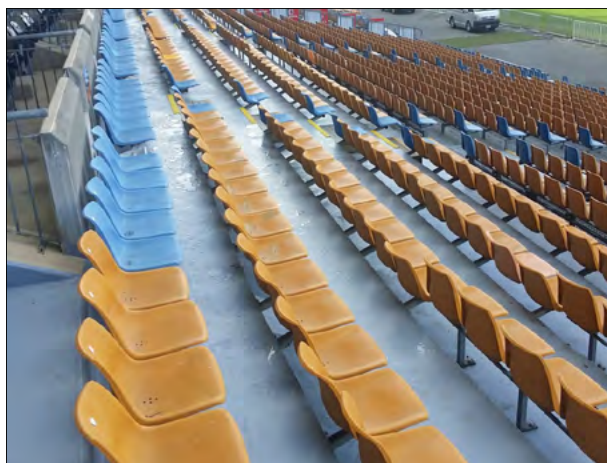
Prepared concrete substrate ready for application



Applied Matacyl Membrane to concrete aisles



Matacyl Membrane applied to stairs and aisles



Finished project

**Equus Industries Ltd**

Email: [info@equus.nz](mailto:info@equus.nz)

Website: [www.equus.nz](http://www.equus.nz)

**Project Name:** Mt Smart Stadium

**Location:** Auckland

**Project Type:** Stadium

**Project Size:** 1,200 sqm

**System:** Equus Matacyl Pedestrian Deck  
Liquid Applied Waterproofing Membrane System

**Certified Applicator:** Sansom Construction  
Systems Ltd

**Main Contractor:** Auckland Stadiums Ltd

**Completion Date:** 2017

## EQUUS PRODUCT SYSTEM REFERENCE SHEET



Area prepared and detailing coats installed



Area primed



Membrane application



Decorative quartz aggregate broadcast



Completed system

**Project Name:** City Impact School

**Location:** Auckland

**Project Type:** Education

**Project Size:** 450 sqm

**System:** Equus Matacryn Pedestrian with Decorative Quartz Aggregate

**Architect:** Babbage Consultants

**Certified Applicator:** Solid Floors Ltd

**Completion Date:** 2024

**Equus Industries Ltd**

Email: [info@equus.nz](mailto:info@equus.nz)

Website: [www.equus.nz](http://www.equus.nz)

# MATACRYL PEDESTRIAN SYSTEM

Liquid applied heavy duty waterproofing membrane

August 2024

## PURPOSE AND AREAS OF USE:

The Matacryl Pedestrian System is a liquid applied elastomeric waterproofing membrane designed to waterproof and protect concrete surfaces such as balconies, decks, ramps and walkways. The system is designed for easy application and easy maintenance with an integrated non-skid surface profile for traffic, the Matacryl Pedestrian System also cures very quickly meaning minimal disruption and downtime for the building owner.

## PRODUCT:

The system encompasses the products below. Refer to details below and standard Equus specifications for full specification information

Matacryl 108 H Primer	Matacryl 107 CM Primer	Matacryl Manual
Matacryl STC	Matacryl Manual LM	Matacryl Thix
Matacryl 215 WL	Matacryl 319	Matacryl 2K FG
SNL Powder	Matacryl Catalyst	Sand for broadcasting

## COLOUR:

Matacryl Pedestrian is available in a painted finish, supplied in a standard colour of RAL 7001 but other colours are available on request. Matacryl pedestrian is also available in a range of decorative coloured quartz aggregates to give an attractive aesthetically pleasing finish.

## SCOPE OF USE:

The Matacryl Pedestrian System is a multi-layer application, and suitable for use over new or existing concrete. Matacryl membrane is commonly used for pedestrian and carparking applications, both interior and exterior, but can be used in a wide range of areas. Other applications can include as a carpark waterproofing, bridge deck waterproofing, sub-grade waterproof detailing including below-grade slabs, pedestrian and vehicular trafficable areas, tunnels, channels and dam structures.

The cured system is a very flexible crack-bridging membrane that retains its flexibility and crack-bridging performance in service even in low temperatures.

## CONDITIONS OF USE:

Matacryl Waterproofing can be applied in temperature conditions between -10°C to +35°C.

Matacryl Waterproofing must be installed by a Certified Equus Applicator, must be installed in accordance with the correct specifications and substrates mentioned in this TDS, or in other Equus approved technical documentation.

## BUILDING CODE COMPLIANCE:

**B2 Durability** - B2.3.1(c) In-service history shows Matacryl Waterproofing has a durability of at least 5 years when installed with the correct specification, installation and maintenance. See Tekton Consulting NZBC Compliance Report.

**D1 Access routes** - D1.3.3(d) Matacryl Waterproofing complies with D1/AS1 on level surfaces, and on sloping surfaces and stairs. See Tekton Consulting NZBC Compliance Report.

**E2 External moisture** - E2.3.1, E2.3.2, E2.3.7 Test data, together with in-service history in New Zealand and internationally, of the correctly installed Matacryl Waterproofing membrane over correctly designed and constructed substrates, show that the membrane successfully resists the ingress of moisture. See Tekton Consulting NZBC Compliance Report.

**F2 Hazardous building materials** - F2.3.1 Well known experience with the type of materials used together with in-service history, show that Matacryl Waterproofing complies with this performance requirement. Refer to SDS at [www.equus.nz](http://www.equus.nz). See Tekton Consulting NZBC Compliance Report.

Equus Industries Ltd. 4 Sheffield St, Blenheim 7274 | Phone: 03 578 0214 | Email: [info@equus.nz](mailto:info@equus.nz) | Web: [www.equus.nz](http://www.equus.nz)

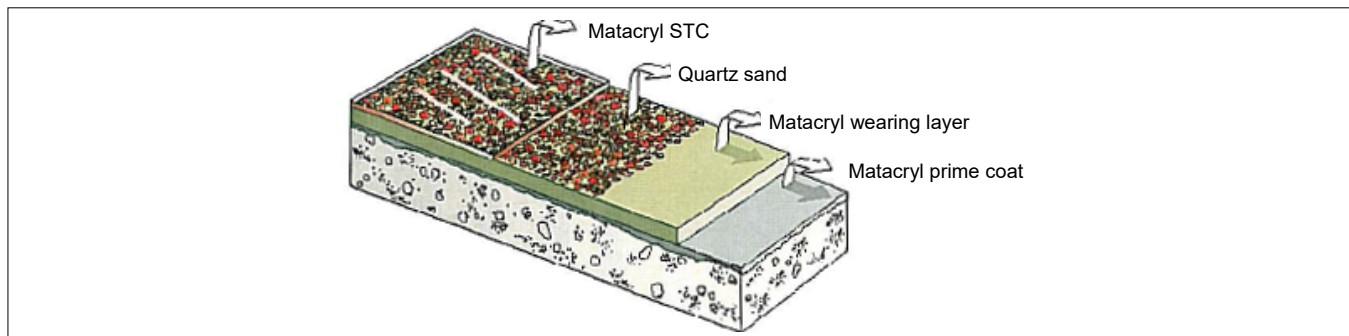
The information in this product data sheet is based on our experience and testing. It represents the latest information available at the time of printing, but no guarantee of its accuracy is made or implied, nor responsibility taken for use to which this information may be put. We reserve the right to alter or up-date information parameters and formulations at any time without notice.

# MATACRYL PEDESTRIAN SYSTEM

Liquid applied heavy duty waterproofing membrane

August 2024

## STRUCTURAL SCHEME:



## PRIMER:

For cementitious substrates	Matacryl 108 H Primer	approx. 0.3-0.5 kg/m <sup>2</sup>
For ceramic/metal substrates	Matacryl 107 CM Primer	approx. 0.2 kg/m <sup>2</sup>

## WALKING AREAS\*:

Membrane layer (Optional for cementitious substrates)	Matacryl Manual	1.5-2.0 kg/m <sup>2</sup>
Wearing layer - colour quartz, slip resistant Filler Broadcast Sealcoat	Matacryl Manual SNL Powder Colour quartz (0.7-1.2 mm) Matacryl STC Clear	1.5 kg/m <sup>2</sup> 1.5 kg/m <sup>2</sup> approx. 3.0-4.0 kg/m <sup>2</sup> 0.5-0.6 kg/m <sup>2</sup>
Wearing layer - uni colour, slip resistant Filler Broadcast Sealcoat	Matacryl Manual SNL Powder Natural sand (0.3-0.7 mm) Matacryl STC Pigmented	1.5-2.0 kg/m <sup>2</sup> 1.5-2.0 kg/m <sup>2</sup> 1.5 kg/m <sup>2</sup> 0.5-0.6 kg/m <sup>2</sup>

\* A higher resistance to cigarette burn can be achieved by applying an optional PU sealcoat.

The exact consumption depends on porosity and flatness of the substrate. The consumptions are valid for an application at +20°C. For full details please refer to the relevant Technical Data Sheet.

## SUPPORTING DOCUMENTATION:

Tekton Consulting NZBC Compliance Report	6 October 2020	<a href="http://www.equus.nz/content/reports/nzbc-compliance-matacryn.pdf">www.equus.nz/content/reports/nzbc-compliance-matacryn.pdf</a>
Other technical reports can be provided on request.		

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
--	----

Equus Industries Ltd. 4 Sheffield St, Blenheim 7274 | Phone: 03 578 0214 | Email: [info@equus.nz](mailto:info@equus.nz) | Web: [www.equus.nz](http://www.equus.nz)

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# MATACRYL PEDESTRIAN SYSTEM

Liquid applied heavy duty waterproofing membrane

August 2024

## MANUFACTURERS CONTACT DETAILS:

Manufacture location	New Zealand
Legal and trading name of manufacturer	Equus Industries Ltd.
Manufacturer address for service	4 Sheffield Street, Blenheim 7274
Manufacturer website	www.equus.nz
Manufacturer email	info@equus.nz
Manufacturer phone number	03 578 0214
Manufacturer NZBN	9429032000306

Equus Industries Ltd. 4 Sheffield St, Blenheim 7274 | Phone: 03 578 0214 | Email: info@equus.nz | Web: www.equus.nz

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# DURACON 108/MATACRYL 108 H PRIMER

Primer for damp or new concrete

April 2024

## PRODUCT:

Duracon 108/Matacryl 108 H Primer is a low viscosity, colourless, two component reactive resin based on methyl methacrylate (MMA).

## USAGE:

Duracon 108/Matacryl 108 H Primer is used as a special prime coat for damp or new concrete substrates. We strongly recommend with all Duracon/Matacryl Primers that curing and adhesion tests are conducted on a particular substrate prior to general use on site.

## STANDARD PACKS:

180 kg steel drums, 18 kg metal pails.

## SHELF LIFE:

6 months when stored in a cool and dry place and in original sealed packaging. Keep additive and catalyst separate. The optimal storage temperature is 15-20°C.

## KEY BENEFITS:

- Improved adhesion to damp concrete and cementitious base substrates.
- Fast and safe curing even at low temperatures.
- Provides good adhesion to subsequent coats.

Liquid State			Cured State		
Viscosity, 25°C	100-130 mPa*s	DIN 53018	Tensile strength	10.4 N/mm <sup>2</sup>	ISO 527
Density, 25°C	1.02 g/ml	ISO 2811	Elongation at max. strength	2.1%	
Pot life/processing time at 20°C	approx 15 min.		Elongation at fracture	2.1%	
Curing time at 20°C	approx 60 min.		Modulus of elasticity	720 N/mm <sup>2</sup>	
Flash Point	+11.5°C	ISO 1516	Density, 20°C	1.18 g/cm <sup>3</sup>	ISO 1183

## PROPERTIES:

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

## SURFACE PREPARATION:

Duracon 108/Matacryl 108 H Primer is suitable for damp concrete and cementitious substrates. There must not be any visible water on the surface. The substrate must be firm, solid and free of dust, fat and oil. Laitance and loose particles must be removed thoroughly, e.g. by shot blasting. Fats or oils can be removed by flame blasting for example. It can also be used on dry surfaces.

## MIXING:

Prior to use, Duracon 108/Matacryl 108 H Primer must be carefully stirred to achieve a uniform distribution of the agents contained in the product. Duracon 108/Matacryl 108 H Primer is thoroughly mixed together with the Duracon/Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the below guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the temperature.

At 30°C	Add 2% by weight of resin
At 20°C	Add 3% by weight of resin
At 10°C	Add 4% by weight of resin
At 0°C	Add 6% by weight of resin
Below 0°C	Add 6% by weight of resin and additionally add Duracon 404, which is an accelerating agent.

**Note:** Weight to Volumetric conversion of Catalyst: 1 cc of Duracon/Matacryl Catalyst weighs 0.64 g. 1gm of Duracon/Matacryl Catalyst = 1.57 cc.

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# DURACON 108/MATACRYL 108 H PRIMER

Primer for damp or new concrete

April 2024

## APPLICATION:

After the catalyst has been stirred in, the primer is poured onto the substrate in stripes and spread with a short-pile paint roller. A notched rubber squeegee can be used for fast distribution of large quantities. Apply at a rate of between 300 gr/m<sup>2</sup> to 500 gr/m<sup>2</sup> depending on density and porosity of the substrate. In any case, continue applying primer until saturation occurs to obtain a continuous resin film. On extremely porous substrates a second prime coat may be required. When a continuous resin film is obtained, broadcast dried quartz sand (particle size 0.7-1.2 mm or 0.3-0.7 mm) into the still wet primer. Consumption approximately 0.5 kg/m<sup>2</sup>.

## HEALTH AND SAFETY:

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application of Duracon 108/Matacryl 108 H Primer. In case of contact with eyes, rinse immediately for a long period of time and consult a physician. In case of contact with skin, clean immediately with water and soap.

Duracon 108/Matacryl 108 H Primer is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all the other electric appliances used on the application site must be explosion-proof versions. For further information see our Material Safety Data Sheets.

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
--	----

## MANUFACTURERS DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
Manufacturer phone number	+61 2 4648 0397

Equus Industries Ltd. PO Box 601, Blenheim | Phone: 03 578 0214 | Email: admin@equus.nz | Web: www.equus.nz

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# DURACON 107/MATACRYL 107 CM PRIMER

Primer for metal and tile substrates

April 2024

## PRODUCT:

Duracon 107/Matacryl 107 CM Primer is a low viscosity, colourless, two component reactive resin based on methyl methacrylate (MMA).

## USAGE:

Duracon 107/Matacryl 107 CM Primer is used as a primer to give excellent bonding to metal substrates (e.g. iron, aluminum, stainless steel) and to ceramic tile substrates. We strongly recommend with all Duracon/Matacryl primers that curing and adhesion tests are conducted on the particular substrate prior to general use on site.

## STANDARD PACKS:

180 kg steel drums, 50 kg metal pails, 20 kg pails.

## SHELF LIFE:

Six months when stored in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15-20°C.

## PROPERTIES:

Liquid State			Cured State		
Viscosity, 25°C	100-130 mPa*s	DIN 53018	Tensile strength	13.3 N/mm <sup>2</sup>	ISO 527
Density, 25°C	0.99 g/ml	ISO 2811	Elongation at max. strength	1.3%	
Pot life/processing time at 20°C	approx 15 min.		Elongation at fracture	1.3%	
Curing time at 20°C	approx 30 min.		Modulus of elasticity	1500 N/mm <sup>2</sup>	
Flash Point	+11.5°C	ISO 1516	Density, 20°C	1.16 g/cm <sup>3</sup>	ISO 1183

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

## SURFACE PREPARATION:

All substrates must be dry, firm, solid and free of dust, fat and oil. Loose tiles and tiles over hollows must also be removed. Steel substrates must be prepared to SA 2.5 (according to DIN 55929).

## MIXING:

Prior to use, Duracon 107/Matacryl 107 CM Primer must be carefully stirred to achieve a uniform distribution of the paraffin contained in the product. Duracon 107/Matacryl 107 CM Primer is thoroughly mixed together with the Duracon/Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the below guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the temperature.

At 30°C	Add 1% by weight of resin
At 20°C	Add 2% by weight of resin
At 10°C	Add 4% by weight of resin
At 0°C	Add 6% by weight of resin

**Note:** Weight to Volumetric conversion of Catalyst: 1 cm<sup>3</sup> of Duracon/Matacryl Catalyst weighs 0.64 g. 1g of Duracon/Matacryl Catalyst = 1.57 cm<sup>3</sup>.

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# DURACON 107/MATACRYL 107 CM PRIMER

## Primer for metal and tile substrates

April 2024

### APPLICATION:

After the catalyst has been stirred in, the primer is applied with a short-pile paint roller. Fire-dried quartz sand (particle size 0.7-1.2mm or 0.3-0.7mm) is broadcast into the still wet primer. Consumption approximately 0.3kg/m<sup>2</sup>.

### HEALTH AND SAFETY:

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application of Duracon107 /Matacryl 107 CM Primer.

In case of contact with eyes, rinse immediately for a long period of time and consult a physician. In case of contact with skin, clean immediately with water and soap.

Duracon 107/Matacryl 107 CM Primer is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all the other electric appliances used on the application site must be explosion-proof versions. For further information see our Material Safety Data Sheets.

### WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
--	----

### MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
Manufacturer phone number	+61 2 4648 0397

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# MATACRYL THIX

## A thixotropic version of Matacryl Manual

August 2024

### PRODUCT:

Matacryl Thix is a viscous, urethane-modified, prereacted 100% solid membrane system based on acrylic monomers. To initiate curing, just add Matacryl Catalyst.

### USAGE:

Matacryl Thix is designed as a simple to apply, highly elastomeric liquid waterproofing membrane and coating, for vertical and inclined substrates. The cured product is a very flexible crack-bridging membrane that retains its flexibility and crack-bridging performance in service even when the temperature reaches -20°C.

The areas of application for Matacryl Thix include:

- As a Bridge Deck waterproofing membrane, on to which asphalt at temperatures up to 250°C can be directly applied.
- For sub-grade waterproofing of Buildings and Civil Engineering Structures, including below-grade Slabs.
- Waterproofing of concrete and metal Railway bridges including directly under track ballast.
- Waterproofing of Pedestrian and Vehicular trafficable areas (Balconies, Car Parks etc.)
- Protection and waterproofing of Tunnels, Channels and Dam structures.
- Waterproofing of containment structures including Reservoirs and waste and contaminated material storage structures.
- Offshore platforms.

Matacryl Thix can be applied at a wide range of ambient and substrate temperatures (-10°C to +35°C) onto cementitious based screeds, concrete, metal, and ceramic tile substrates, and filled bitumen/asphalt under specific conditions.

### STANDARD PACKS:

30 kg units.

### PROPERTIES:

### KEY BENEFITS:

- Highly flexible
- Excellent crack bridging characteristics
- Easy to apply
- Excellent waterproofing properties
- Very high impact and puncture resistance
- Good chemical and abrasion resistance
- Fully cured one hour after application

Liquid State					
Viscosity, 25°C			4000 mPa*s		DIN 53018
Density, 25°C			1.36 g/ml		ISO 2811
Pot life/processing time at 20°C			15 min.		
Curing time at 20°C			approx. 60 min.		
Flash Point			+11.5°C		ISO 1516
Cured State tested at 20°C			Cured State samples conditioned at -20°C for 24hrs before testing		
Tensile strength	6.7 N/mm <sup>2</sup>	ISO 527	Tensile strength	7.1 N/mm <sup>2</sup>	ISO 527
Elongation	320%	ISO 527	Elongation	340%	ISO 527
Modulus of elasticity	65 MPa	ISO 527	Modulus of elasticity	460 MPa	ISO 527
Abrasion 1000 cycles	64 mg	ISO 7784-2	Dynamic crack-bridging	>5 mm	BPG
Dynamic crack-bridging	>5 mm	BPG			
Shore A hardness	>85 IRHD	NFP 98285			
Shore D hardness	55	DIN 53505			

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# MATACRYL THIX

## A thixotropic version of Matacryl Manual

August 2024

### SUBSTRATE PREPARATION:

The area to be waterproofed must be dry, firm, solid and free of dust, fat and oil. Laitance and loose particles must be removed thoroughly, e.g. by shot blasting. Fats or oils as well as humidity can be removed by flame blasting for example. Before application of Matacryl Thix, a suitable Matacryl Primer, including sand-blasting when appropriate, must be first applied. For further details, see our general preparation and application guidelines for Matacryl waterproofing systems.

### MIXING:

Prior to use, Matacryl Thix must be carefully stirred to achieve a uniform distribution of agents contained in the product. Matacryl Thix is then thoroughly mixed together with the Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the following guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the substrate temperature.

At 30°C:	Add 200 grams of catalyst to a pail of 30 kg
At 20°C:	Add 350 grams of catalyst to a pail of 30 kg
At 10°C:	Add 700 grams of catalyst to a pail of 30 kg
At 0°C:	Add 1200 grams of catalyst to a pail of 30 kg
Below -5°C:	Add 1200 grams of catalyst to a pail of 30 kg and additionally add Matacryl Accelerator. Please contact your Equus Representative for further details.

**Note:** Weight to Volumetric conversion of Catalyst. 1 cc of Matacryl Catalyst weighs 0.64gm. 1gm of Matacryl Catalyst = 1.57 cc

### APPLICATION:

Matacryl Thix is designed to be manually applied using a brush, roller or squeegee.

### CONSUMPTION:

For product consumption per m<sup>2</sup>; please consult the System Build-up Sheets.

Per layer of membrane; a minimum thickness of 1mm (=1.23kg/m<sup>2</sup>) should always be applied per coat.

### SHELF LIFE:

Six months when stored in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15-20°C.

### BUILDING CODE COMPLIANCE:

For Building Code Compliance information see the (EMC) Equus Matacryl Carpark System TDS or (EMP) Equus Matacryl Pedestrian System TDS.

### HEALTH AND SAFETY:

Protective clothing, gloves and safety goggles must be worn when filling, mixing or handling of Matacryl Thix. When the product is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapour as well as direct contact with skin or eyes. For further information see our Safety Data Sheet.

### WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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### MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
Manufacturer phone number	+61 2 4648 0397

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# MATACRYL MANUAL LM

## Liquid applied low modulus waterproofing membrane

August 2024

### PRODUCT:

Matacryl Manual LM is a medium viscosity, urethane-modified, prereacted 100% solid membrane system based on acrylic monomers. To initiate curing, just add Matacryl Catalyst.

### USAGE:

Matacryl Manual LM is designed as a liquid applied, low modulus waterproofing membrane and coating. Can also be used as a joint filler with low dynamic movements.

The cured product is a very flexible crack-bridging membrane that retains its flexibility and crack-bridging performance in service even when the temperature reaches -30°C.

The areas of application for Matacryl Manual LM include:

- As a Bridge Deck waterproofing membrane, on to which asphalt at temperatures up to 250°C can be directly applied.
- For sub-grade waterproofing of Buildings and Civil Engineering Structures, including underneath Ground Slabs.
- Waterproofing of concrete and metal Railway bridges including directly under track ballast.
- Waterproofing of Pedestrian and Vehicular trafficable areas (Balconies, Car Parks etc.)
- The protection and waterproofing of Stadium Terracing.
- Protection and waterproofing of Tunnels, Channels and Dam structures.
- Waterproofing of containment structures including Reservoirs and waste and contaminated material storage structures.
- As a joint filler for joints with low dynamic movements.

Matacryl Manual LM can be applied at a wide range of ambient and substrate temperatures (-10°C to +35°C) onto cementitious based screeds, concrete, filled bitumen/asphalt, metal, ceramic tile and wood substrates.

### STANDARD PACKS:

25 kg units.

### PROPERTIES:

Liquid State		
Viscosity, 25°C	270-430 mPa*s	DIN 53018
Density, 25°C	1.23 g/ml	ISO 2811
Pot life/processing time at 20°C	15 min.	
Curing time at 20°C	approx. 60 min.	
Flash Point	+11.5°C	ISO 1516

Cured State tested at 20°C		
Tensile strength	5.0 N/mm <sup>2</sup>	ISO 527
Elongation	330%	ISO 527
Modulus of elasticity	8.3 MPa	ISO 527
Abrasion 1000 cycles	64 mg	ISO 7784-2
Dynamic crack-bridging	>5 mm	BPG
Shore A hardness	>85 IRHD	NFP 98285
Shore D hardness	55	DIN 53505

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# MATACRYL MANUAL LM

## Liquid applied low modulus waterproofing membrane

August 2024

### PROPERTIES continued:

Cured State samples conditioned at -20°C for 24hrs before testing		
Tensile strength	4.3 N/mm <sup>2</sup>	ISO 527
Elongation	315 %	ISO 527
Modulus of elasticity	225 MPa	ISO 527
Dynamic crack-bridging	>5 mm	VTT

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

### SUBSTRATE PREPARATION:

The area to be waterproofed must be dry, firm, solid and free of dust, fat and oil. Laitance and loose particles must be removed thoroughly, e.g. by shot blasting. Fats or oils as well as dampness can be removed by flame blasting for example. Before application of Matabryl Manual LM, a suitable Matabryl Primer must be first applied, including sand-blasting when appropriate. For further details, see our general preparation and application guidelines for Matabryl waterproofing systems.

### MIXING:

Prior to use, Matabryl Manual LM must be carefully stirred to achieve a uniform distribution of paraffin contained in the product. Matabryl Manual LM is then thoroughly mixed together with the Matabryl Catalyst (50% dibenzoyl peroxide), in accordance with the following guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the substrate temperature.

At 30°C:	Add 250 grams of catalyst to a pail of 25 kg
At 20°C:	Add 350 grams of catalyst to a pail of 25 kg
At 10°C:	Add 600 grams of catalyst to a pail of 25 kg
At 0°C:	Add 1000 grams of catalyst to a pail of 25 kg
Below -5°C:	Add 1000 grams of catalyst to a pail of 25 kg and additionally add Matabryl Accelerator. Please contact your Equus Representative for further details.

**Note:** Weight to Volumetric conversion of Catalyst. 1 cm<sup>3</sup> of Matabryl Catalyst weighs 0.64gm. 1gm of Matabryl Catalyst = 1.57 cm<sup>3</sup>

### APPLICATION:

Matabryl Manual LM is designed to be manually applied using a trowel or squeegee.

### THIXOTROPY:

If a slightly higher thixotropy of Matabryl Manual LM is required up to 1% (by weight) of silica based thixotropic agent can be mixed in on site.

### CONSUMPTION:

For product consumption per m<sup>2</sup>; please consult the System Build-up Sheets.

Per layer of membrane; a minimum thickness of 1mm (=1.23 kg/m<sup>2</sup>) should always be applied per coat.

### SHELF LIFE:

Six months when stored in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15-20°C.

### BUILDING CODE COMPLIANCE:

For Building Code Compliance information see the (EMC) Equus Matabryl Carpark System TDS or (EMP) Equus Matabryl Pedestrian System TDS.

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# MATACRYL MANUAL LM

Liquid applied low modulus waterproofing membrane

August 2024

## HEALTH AND SAFETY:

Protective clothing, gloves and safety goggles must be worn when filling, mixing or handling of Matacryl Manual LM. When the product is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapour as well as direct contact with skin or eyes. For further information see our Safety Data Sheet.

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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## MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
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Manufacturer website	
Manufacturer email	orders@tremco.com.au
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# MATACRYL MANUAL

## Manually applied 100% seamless waterproofing membrane

August 2024

### PRODUCT:

Matacryl Manual is a medium viscosity, urethane-modified, prereacted 100% solid membrane system based on acrylic monomers. To initiate curing, just add Matacryl Catalyst.

### USAGE:

Matacryl Manual is designed as a simple to apply, highly elastomeric liquid waterproofing membrane and coating. The cured product is a very flexible crack-bridging membrane that retains its flexibility and crack-bridging performance in service even when the temperature reaches -20°C.

The areas of application for Matacryl Manual include:

- As a Bridge Deck waterproofing membrane, on to which asphalt at temperatures up to 250°C can be directly applied.
- For sub-grade waterproofing of Buildings and Civil Engineering Structures, including below-grade Slabs.
- Waterproofing of concrete and metal Railway bridges including directly under track ballast.
- Waterproofing of Pedestrian and Vehicular trafficable areas (Balconies, Car Parks etc.)
- Protection and waterproofing of Tunnels, Channels and Dam structures.
- Waterproofing of containment structures including Reservoirs and waste and contaminated material storage structures.
- Offshore platforms.

Matacryl Manual can be applied at a wide range of ambient and substrate temperatures (-10°C to +35°C) onto cementitious based screeds, concrete, metal, and ceramic tile substrates, and filled bitumen/asphalt under specific conditions.

### STANDARD PACKS:

30 kg units.

### PROPERTIES:

### KEY BENEFITS:

- Highly flexible
- Excellent crack bridging characteristics
- Easy to apply
- Excellent waterproofing properties
- Very high impact and puncture resistance
- Good chemical and abrasion resistance
- Fully cured one hour after application



Liquid State		
Viscosity, 25°C	460-730 mPa*s	DIN 53018
Density, 25°C	1.3 g/ml	ISO 2811
Pot life/processing time at 20°C	15 min.	
Curing time at 20°C	approx. 60 min.	
Flash Point	+11.5°C	ISO 1516

Cured State tested at 20°C		
Tensile strength	8.4 N/mm <sup>2</sup>	ISO 527
Elongation	370%	ISO 527
Modulus of elasticity	78 MPa	ISO 527
Abrasion 1000 cycles	64 mg	ISO 7784-2
Dynamic crack-bridging	>5 mm	BPG
Shore A hardness	>85 IRHD	NFP 98285
Shore D hardness	55	DIN 53505

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# MATACRYL MANUAL

## Manually applied 100% seamless waterproofing membrane

August 2024

### PROPERTIES continued:

Cured State samples conditioned at -20°C for 24hrs before testing		
Tensile strength	8.8 N/mm <sup>2</sup>	ISO 527
Elongation	360%	ISO 527
Modulus of elasticity	630 MPa	ISO 527
Abrasion 1000 cycles	64 mg	ISO 7784-2
Dynamic crack-bridging	>5 mm	BPG

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

### SUBSTRATE PREPARATION:

The area to be waterproofed must be dry, firm, solid and free of dust, fat and oil. Laitance and loose particles must be removed thoroughly, e.g. by shot blasting. Fats or oils as well as dampness can be removed by flame blasting for example. Before application of Matacryl Manual, a suitable Matacryl Primer must be first applied, including sand-blasting when appropriate. For further details, see our general preparation and application guidelines for Matacryl waterproofing systems.

### MIXING:

Prior to use, Matacryl Manual must be carefully stirred to achieve a uniform distribution of agents contained in the product. Matacryl Manual is then thoroughly mixed together with the Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the following guidelines.

It should be noted that the amount of catalyst powder to be added depends upon the substrate temperature.

At 30°C	Add 200 grams of catalyst to a pail of 30 kg
At 20°C	Add 350 grams of catalyst to a pail of 30 kg
At 10°C	Add 700 grams of catalyst to a pail of 30 kg
At 0°C	Add 1200 grams of catalyst to a pail of 30 kg
Below -5°C	Add 1200 grams of catalyst to a pail of 30 kg and additionally add Matacryl Accelerator. Please contact your Equus Representative for further details.

**Note:** Weight to Volumetric conversion of Catalyst. 1 cc of Matacryl Catalyst weighs 0.64gm. 1gm of Matacryl Catalyst = 1.57 cc

### APPLICATION:

Matacryl Manual is designed to be manually applied using a roller or squeegee.

### CONSUMPTION:

For product consumption per m<sup>2</sup>; please consult the System Build-up Sheets.

Per layer of membrane; a minimum thickness of 1mm (=1.23kg/m<sup>2</sup>) should always be applied per coat.

### SHELF LIFE:

Six months when stored in a cool and dry place and in originally closed packaging. The optimal storage temperature is 15-20°C.

### BUILDING CODE COMPLIANCE:

For Building Code Compliance information see the (EMC) Equus Matacryl Carpark System TDS or (EMP) Equus Matacryl Pedestrian System TDS.

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# MATACRYL MANUAL

Manually applied 100% seamless waterproofing membrane

August 2024

## HEALTH AND SAFETY:

Protective clothing, gloves and safety goggles must be worn when filling, mixing or handling of Matacryl Manual. When the product is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapour as well as direct contact with skin or eyes. For further information see our Safety Data Sheet.

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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## MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
Manufacturer phone number	+61 2 4648 0397

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# MATACRYL 215 WL

Formally known as Duracon 215

August 2024

## PRODUCT:

Matacryl 215 WL is a polyurethane modified resin based on acrylic monomers and polymers.

## USAGE:

Matacryl 215 WL is an elastised binder intended for the formulation of flexible membranes and flexible wear resistant coatings exposed to subzero temperatures. It is mainly used for:

- Waterproofing and shock absorbing membranes.
- Flexible floor coverings especially if exposed to low temperatures e.g. coolers and freezers.
- As a wearing layer for outdoor applications exposed to heavy mechanical loadings and rapid temperature variations i.e. ramps, bridges and carparks.

## STANDARD PACKS:

180 kg steel drums, 25 kg metal pails.

## SHELF LIFE:

Six months when stored in a cool and dry place and in original sealed packaging. The optimal storage temperature is 15-20°C.

## PROPERTIES:

Liquid State			Cured State		
Viscosity, 25°C	160-200 mPa*s	DIN 53018	Tensile strength, 20°C	11.0 MPa	ISO 527
Density, 25°C	0.99 g/ml	ISO 2811	Tensile strength, 0°C	20.6 MPa	ISO 527
Pot life/processing time at 20°C	15-18 min.		Elongation at fracture, 20°C	250%	
Curing time at 20°C	60-120 min.		Elongation at fracture, 0°C	158%	
Flash Point	0-35°C		Modulus of elasticity, 20°C	82.4 MPa	
			Modulus of elasticity, 0°C	407 MPa	

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

## SURFACE PREPARATION:

The area to be coated, must be pretreated with a Matacryl primer (e.g. Matacryl 108 H Primer) including sanding. The substrate must be dry, firm, solid and free of dust, fat and oil. All substances that can interfere with good adhesion should be removed.

## MIXING:

Prior to use Matacryl 215 WL must be carefully stirred to achieve a uniform distribution of the paraffin contained in the product. Matacryl 215 WL is thoroughly mixed together with the Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the guidelines below .

At 30°C	Add 1% by weight of resin
At 20°C	Add 2% by weight of resin
At 10°C	Add 4% by weight of resin
At 0°C	Add 5% by weight of resin
Below 0°C	Add 5% by weight of resin and additionally add Matacryl 404, which is an accelerating agent.

It should be noted that the amount of catalyst powder to be added depends upon the temperature.

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# MATACRYL 215 WL

*Formally known as Duracon 215*

August 2024

## APPLICATION:

The material consumption and application method will depend upon the Matacryl Waterproofing system in which Matacryl 215 WL resin is being used. See specific Systems Data Sheets for further information.

## BUILDING CODE COMPLIANCE:

For Building Code Compliance information see the (EMC) Equus Matacryl Carpark System TDS or (EMP) Equus Matacryl Pedestrian System TDS.

## HEALTH AND SAFETY:

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application of Matacryl 215 WL.

In case of contact with eyes, rinse immediately for a long period of time and consult a physician. In case of contact with skin, clean immediately with water and soap.

Matacryl 215 WL is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all the other electric appliances used on the application site must be explosion-proof versions. For further information see our Material Safety Data Sheets.

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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## MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
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# MATACRYL STC

## Sealer for Matacryl waterproofing systems

August 2024

### PRODUCT:

Matacryl STC is a medium viscous, elastified and UV-protected surface sealer based on acrylic resins. The curing is initiated by addition of Matacryl Catalyst powder.

### USAGE:

Matacryl STC is used as a surface sealer for Matacryl waterproofing systems to improve general resistance and maintenance properties.

### STANDARD PACKS:

100 kg resp. 25 kg units.

### PROPERTIES:

### KEY BENEFITS:

- Easy to apply
- Fast curing
- Clear or pigmented
- Semi-flexible
- Weather resistant
- Acid rain resistant

Liquid State		
Colour	Light blue violet	
Viscosity, 25°C	140-180 mPa*s	DIN 53018
Density, 25°C	0.98 g/ml	ISO 2811
Pot life/processing time at 25°C	15 min.	
Curing time at 25°C	approx. 60 min.	
Recoat time at 25°C	approx. 90 min.	
Flash Point	+11.5°C	ISO 1516
Pigmented	Grey and ivory	
Cured State		
Tensile strength	6.8 N/mm <sup>2</sup>	ISO 527
Elongation	130%	ISO 527
Modulus of elasticity	38 MPa	ISO 527
Abrasion Taber 500 cycles	51 mg	ISO 7784-2
Shore D hardness	55	DIN 53505

\* Please note that an objective comparison with other data is only possible if norms and parameters are identical.

### MIXING:

Prior to use, Matacryl STC must be stirred to achieve a uniform distribution of paraffin and eventual pigments added to the sealer. To initiate curing the Matacryl Catalyst shall be added to suitable volumes of product and carefully mixed. The volume of catalysed batch depends on the actual area size and application conditions whilst the amount of catalyst depends on the ambient temperature.

Catalyst table for batch of 10 litres Matacryl STC:

At 30°C:	Add 80 grams or 120 ml catalyst
At 20°C:	Add 100 grams or 150 ml catalyst
At 10°C:	Add 200 grams or 300 ml catalyst
At 0°C:	Add 300 grams or 450 ml catalyst
At -10°C:	Add 500 grams or 750 ml catalyst

For eventual addition of filler or pigment on site please contact your local Equus Representative for further details.

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# MATACRYL STC

## Sealer for Matacryn waterproofing systems

August 2024

### APPLICATION:

Immediately after the catalyst has been added and mixed, the dealer is spread onto the Matacryn base coat using a rubber squeegee and paint roller. For good results it is important always to work with freshly catalyzed material i.e. small batch sizes, not the full 25 kg. Layer thickness must be kept within 0.3-0.8 l/m<sup>2</sup> per coat. Consumption of Matacryn STC depends on the system and varies from 0.3-1.0 kg or litre per m<sup>2</sup>.

### SHELF LIFE:

Six months when stored in a cool and dry place and in originally closed packaging and protected from direct sunlight. The optimal storage temperature is between 10-20°C.

### BUILDING CODE COMPLIANCE:

For Building Code Compliance information see the (EMC) Equus Matacryn Carpark System TDS or (EMP) Equus Matacryn Pedestrian System TDS.

### HEALTH AND SAFETY:

Protective clothing, gloves and safety goggles shall be worn when filling, mixing or handling Matacryn STC. If the product is applied in enclosed areas without natural ventilation, forced ventilation must be arranged. Avoid strong concentration of vapour as well as direct contact with skin or eyes.

Matacryn STC is highly flammable; keep away from open fire and other sources of ignition like welding and do not smoke when handling. For further information see the Safety Data Sheet.

### WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
--	----

### MANUFACTURERS CONTACT DETAILS:

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# DURACON CATALYST

April 2024

## PRODUCT:

Duracon Catalyst is an almost odourless, free flowing, white powder consisting of stabilized 50% dibenzoyl peroxide.

## USAGE:

Duracon Catalyst is used with Duracon reactive resins to initiate polymerisation.

## CONSUMPTION:

Consumption of Duracon Catalyst depends on the temperature at which the Duracon reactive resins are being applied. See separate individual Technical Data Sheets for the recommended quantities.

If no accurate scale is available at the application site, calculate the quantity in grams and convert the result into cm<sup>3</sup> using a powder density 0.64 g/cm<sup>3</sup>. The required amount of catalyst can then be measured using a measuring beaker:

1 cm<sup>3</sup> Duracon Catalyst = 0.64 g. 1 g Duracon Catalyst = 157 cm<sup>3</sup>.

## STANDARD PACKS:

25kg boxes, small amounts are available on request.

## SHELF LIFE:

Six months when stored in a cool and dry place and in original sealed packaging. The optimal storage temperature is 15-20°C.

## PROPERTIES:

Technical Characteristics	
Melting/distortion temperature	>54°C
Powder density	0.64 kg/l
Solubility in water	Not soluble
Solubility in organic solvents	Highly soluble
Thermal decomposition	>60°C

## APPLICATION:

Depending on the Duracon reactive resin type and prevailing ambient substrate temperatures between 1-6% by weight of resin should be added and are stirred in until completely dissolved. To delay or accelerate polymerisation, additives can be used. These can be obtained upon request. Such additives are necessary when application is done at temperatures above +30°C or below 0°C. All accelerator and inhibiting agents, pigment powders, colour pastes and thixotropic agents should be mixed with the resin before the catalyst is added. Fillers are added after the Duracon Catalyst is added and stirred in.

## HEALTH AND SAFETY:

### For Duracon Catalyst:

Wear suitable protective clothing, gloves and safety goggles. After contact with eyes rinse immediately with plenty of water and consult a physician. After contact with skin wash immediately with water and soap.

The product is an oxidizing agent; keep away from heat and all sources of ignition and do not smoke. Avoid direct contact with accelerators, e.g. Duracon 404.

### For application of the resins:

Wear suitable protective clothing, gloves and safety goggles. After contact with eyes rinse immediately with plenty of water and consult a physician. After contact with skin wash immediately with water and soap.

This product is flammable; keep away from heat and all sources of ignition and do not smoke. The mixer as well as all other electrical devices on the application site must be spark/explosion proof.

For further information see our Material Safety Data Sheet.

Equus Industries Ltd. PO Box 601, Blenheim | Phone: 03 578 0214 | Email: [admin@equus.nz](mailto:admin@equus.nz) | Web: [www.equus.nz](http://www.equus.nz)

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# DURACON CATALYST

April 2024

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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## MANUFACTURERS CONTACT DETAILS:

Manufacture location	Australia
Legal and trading name of manufacturer	Tremco CPG Pty Ltd.
Manufacturer address for service	12/4 Southridge Street, Eastern Creek, NSW 2766, Australia
Manufacturer website	
Manufacturer email	orders@tremco.com.au
Manufacturer phone number	+61 2 4648 0397

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# DURACON 319/MATACRYL 319

## Surface sealer

April 2024

### PRODUCT:

Duracon 319/Matacryl 319 is a medium viscosity, UV-resistant, blue-violet, two component reactive resin based on methyl methacrylate (MMA). In the liquid state it is blue-violet in colour. After polymerisation the blue-violet colouring is no longer visible.

### USAGE:

A permanent hot water loading is intended to be used as a surface sealer for Duracon 319/Matacryl 319 floor coatings where the floor is subjected to water loadings; e.g. the food industry. Duracon 319/Matacryl 319 resists hot water spillage up to 80°C. The good flexibility and high UV resistance, also make Duracon 319/Matacryl 319 an ideal sealcoat for outdoor applications.

### KEY BENEFITS:

- Medium viscosity
- Flexible and good UV resistance
- Suited for surfaces with water loading

### IMPORTANT ADVICE:

A permanent hot water loading can result in a white discolouration of the Duracon 319/Matacryl 319. Hot water causes thermal tensions, that can lead to crackle cracks. Therefore, where Duracon 319/Matacryl 319 is used in areas of hot water loading, always gather waste or flowing water (particularly hot water) into channels and convey it into a proper drainage system. Provide for a sufficient number of gullies.

### STANDARD PACKS:

180 kg steel drums, 20 kg metal pails.

### SHELF LIFE:

Six months when stored in a cool and dry place and in original sealed packaging. The optimal storage temperature is 15-20°C.

Liquid State			Cured State		
Viscosity, 25°C	160-200 mPa*s	DIN 53214	Tensile strength	13.4 N/mm <sup>2</sup>	DIN 53455
Density, 25°C	0.98 g/ml	DIN 51757	Elongation at max. strength	14.8%	
Pot life/processing time at 20°C	approx. 15 min.		Elongation at fracture	15.5%	
Curing time at 20°C	approx. 30 min.		Modulus of elasticity	696 N/mm <sup>2</sup>	
Flash Point	+11.5°C	ISO 1516	Density, 20°C	1.17 g/cm <sup>3</sup>	DIN 53479

### PROPERTIES:

Please note that an objective comparison with other data is only possible if norms and parameters are identical.

### SURFACE PREPARATION:

The Duracon/Matacryl coating system to be sealed must be dry, clean and free of dust and fat. Any fresh Duracon/Matacryl coating system must be completely cured and cooled down. Sealers can be applied in several layers.

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# DURACON 319 / MATACRYL 319

## Surface sealer

April 2024

### MIXING:

Prior to use Duracon 319/Matacryl 319 must be carefully stirred to achieve a uniform distribution of the paraffin contained in the product. Duracon 319/Matacryl 319 is thoroughly mixed together with the Duracon/Matacryl Catalyst (50% dibenzoyl peroxide), in accordance with the below guidelines.

At 30°C	Add 1% by weight of resin
At 20°C	Add 1.5% by weight of resin
At 10°C	Add 3% by weight of resin
At 0°C	Add 5% by weight of resin
Below 0°C	Add 5% by weight of resin and additionally add an accelerating agent.

It should be noted that the amount of catalyst powder to be added depends upon the temperature.

**Note:** Weight to Volumetric conversion of Catalyst. 1 cm<sup>3</sup> of Duracon/Matacryl Catalyst weighs 0.64g. 1g of Duracon/Matacryl Catalyst = 1.57 cm<sup>3</sup>.

### APPLICATION:

A compatible pigment powder can be used to colour the Duracon 319/Matacryl 319. Please contact your Equus Representative for details. Immediately after the catalyst has been stirred in, the sealer is poured onto the floor in stripes (do not apply directly out of the mixing pails) and spread on to the coating with a short-pile paint roller. On structured coatings the sealing can be pre-spread before rolling with a rubber squeegee.

It is important to work with freshly mixed material, i.e. to catalyze smaller batches; with a maximum consumption per layer of 0.8 kg/m<sup>2</sup>. If a thicker layer is required it must be applied in two separate coats.

Consumption of Duracon 319/Matacryl 319 sealer is between 0.3 and 0.8 kg/m<sup>2</sup>, depending on the Duracon/Matacryl coating system on to which it is supplied.

### HEALTH AND SAFETY:

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application of Duracon 319/Matacryl 319.

In case of contact with eyes, rinse immediately for a long period of time and consult a physician. In case of contact with skin, clean immediately with water and soap.

Duracon 319/Matacryl 319 is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all the other electric appliances used on the application site must be explosion-proof versions. For further information see our Material Safety Data Sheets.

### WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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### MANUFACTURERS CONTACT DETAILS:

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# DURACON/MATACRYL 2K FG CLEAR TOPCOAT

Clear chemical resistant finish coat

June 2024

## PURPOSE AND AREAS OF USE:

An interior/exterior clear top-coat for application over mineral, aggregate floor surfaces.

## PRODUCT:

A UV stable, two component aliphatic polyurethane overglaze.

## PROCESS COMPATIBILITY:

Generally used as clear chemical resistant finish coats for mineral aggregate broadcast floor finishes.

## STANDARD PACK:

1 litre, 4 litre units available, packed in metal containers.

## PHYSICAL PROPERTIES:

Liquid Material	Mixed	Unit A	Unit B
Solids (% by weight)	57%	50%	69%
Specific Gravity	1.06	1.07	1.05
Flash Point (°C)	> 23	> 23	32
Shelf Life	-	3 years in original sealed cans when stored in cool dry conditions	2 years in original sealed cans when stored in cool dry conditions

Applied Film	
Flexibility	Passes 3mm mandrel at 75 micron. DFT (ASTM-D522/D522m/17) at 23°C on galvanized steel substrate.
Durability	Excellent weatherability.
Abrasion Resistance	Excellent
Chemical Resistance	Excellent resistance to pollutants, hydrocarbon, solvents, dilute alkalis and inorganic acids. Limited resistance to organic acids and oxygenated solvents.
Fungus Resistance	Duracon/Matacryl 2K FG Topcoat presents an inert surface which will not support the growth of mould or fungi.

Spreading rate	Generally 2.5 - 3.0 sqm/litre, as supplied but will depend on surface profile.
Pot life	Use within 30 minutes of mixing
Thinning / Clean up	Use Colourcure AP Thinners. Clean equipment immediately after use.

## APPLICATION PROPERTIES:

### Dry time:

Touch dry	3 hours
Full cure	5-7 days
Recoat time	4-6 hours

Do not apply Duracon/Matacryl 2K FG in temperatures less than 5°C or when the surface temperature is less than 3°C

## THINNING / CLEANUP:

Use Colourcure AP Thinners. Clean equipment immediately after use

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# DURACON/MATACRYL 2K FG CLEAR TOPCOAT

Clear chemical resistant finish coat

June 2024

## MIXING METHOD:

Add Unit B to Unit A while mixing. Mix thoroughly for 3-5 minutes with drill and stirrer. Allow to stand or 10-15 minutes after mixing before applying.

## APPLICATION METHOD:

Duracon/Matacryl 2K FG Clear can be applied by brush or roller. If required for ease of application, Duracon/Matacryl 2K FG may be diluted with up to 5% by volume of Colourcure AP Thinners prior to application.

Brush	Use a high quality, natural bristle brush.
Roller	Use lambswool with nap depending on surface profile of aggregate.

## HEALTH AND SAFETY:

Duracon/Matacryl 2K FG Topcoat is a solvent based polyurethane coating. Precautions for handling solvent base materials must be observed including:

- **Store** in cool conditions away from naked flames.
- **No smoking** in area while handling or applying Duracon/Matacryl 2K FG Topcoat
- **Use of good** quality barrier cream as minimum protection on exposed skin.
- **Use of solvent cartridge respirator** and **safety goggles** while handling material.

**Note** that this material contains less than 0.2% free monomeric hexamethylene diisocyanate and presents a low isocyanate exposure health risk.

## TRANSPORT AND STORAGE:

Both A & B components are classified UN 1263 Class 3. Correct transport and storage protocols must be observed.

## WARNINGS AND BANS:

Is the building product/building product line subject to warning or ban under section 26 of the Building Act 2004?	No
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# WHO ARE WE?

Equus Industries provides technical waterproofing solutions for Architects, Engineers, Property Managers, and Contractors in the building industry. One system does not fit all.

Equus can provide complete solutions, systems, specifications, technical support and warranties.



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