

# MATACRYL MACHINE

## Elastomeric liquid waterproofing membrane

November 2024

### PRODUCT:

Matacryl Machine is a medium viscosity, urethane-modified, pre-reacted, 100% solid membrane system based on acrylic monomers.

### FEATURES AND BENEFITS:

- Highly flexible with excellent crack-bridging characteristics even at low temperatures (-20°C and below)
- Can be applied with equal ease to both horizontal and vertical surfaces
- Excellent waterproofing properties
- Very high impact and puncture resistance
- One coat membrane application
- Excellent adhesion to many types of substrates
- Good chemical and abrasion resistance
- Can be applied over a wide range of ambient and substrate temperatures (-10°C to +35°C)
- Spray equipment used does not require heating
- Can be easily repaired, excellent inter-layer adhesion due to chemical bonding
- Overcoating time not critical
- Fully cured one hour after application

### USAGE / PURPOSE:

Matacryl Machine is designed as a cold spray applied highly elastomeric liquid waterproofing membrane and coating. The cured product is a highly flexible crack-bridging membrane that keeps its flexibility and crack-bridging performance in service even at very low temperatures.

The domains of application for Matacryl Machine include:

- As bridge deck waterproofing membrane, onto which asphalt at temperatures up to 250°C can be directly applied.
- For the sub-grade waterproofing of buildings and civil engineering structures, including underneath ground slabs.
- The waterproofing of concrete and metal railway bridges including directly under track ballast.
- The waterproofing of pedestrian and vehicular trafficked areas (balconies, carparks etc.).
- The protection and waterproofing of stadium terracing.
- The waterproofing of tunnels, channels and dam structures.
- The waterproofing of containment structures including reservoirs and waste and contaminated material storage structures.
- Offshore platforms.

Matacryl Machine can be applied at a whole 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.

### PACKAGING AND STORAGE:

50 kg units (Part A and Part B, each 25 kg pails)

250 kg units (Part A and Part B, each 125 kg drums)

Store in a cool and dry place and in originally closed packaging between 5°C and 30°C. The optimal storage temperature is 15-20°C. Protect from weather and moisture/contaminant ingress.

### COLOUR:

RAL7001

### SHELF LIFE:

12 months in unopened pack.

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### CERTIFICATES AND APPROVALS:

CE according to EN13813 and 1504-2 (when used as part of complete system).

### TECHNICAL CHARACTERISTICS:

Liquid State	
Viscosity, 25°C (EN DIN 53019)	1300-2100 mPa.s (shear rate 50 s <sup>-1</sup> )
Density, 23°C (ISO 2811)	~ 1.2 kg/l
Pot life/processing time at 20°C	~ 15 min
Curing time at 20°C	~ 60 min
Flash point (ISO 1516)	+ 11.5°C

Cured	
Shore A hardness (EN ISO 868)	93
Shore D hardness (EN ISO 868)	35
Tensile strength at 25°C (EN ISO 527)	11 MPa
Tensile strength at -20°C (EN ISO 527)	26.7 MPa
Elongation at fracture at 25°C (EN ISO 527)	293%
Elongation at fracture at -20°C (EN ISO 527)	138%
Modulus of elasticity at 25°C (EN ISO 527)	47.1 MPa
Modulus of elasticity at -20°C (EN ISO 527)	449 MPa
Density, 23°C (ISO 1183)	~ 1.4 kg/l

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

### APPLICATION:

#### APPLICATION CONDITIONS:

Ambient temperature range	0°C - +30°C
Substrate temperature range	0°C - +30°C
Ambient relative humidity	<95%
Substrate relative humidity (for primers)	<5.5% (TRAMAX scale or 92% RH BS 8203)

- In above mentioned temperatures, resin is optimised for best application effect and assumed material consumptions can be maintained.
- During application and initial curing of product, substrate temperature needs to be at least 3°C higher than dew point temperature.
- In closed rooms a forced ventilation with at least 7-fold air exchange per hour is recommended.
- Do not apply material in direct sunlight as it may prevent proper curing and cause inter-coat adhesion problems.
- To assess possibility of application outside of these conditions or application temperatures below 0°C, please consult your local Equus Representative.

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### 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 the application of the Matacryl Machine, a suitable Matacryl Primer, including sanding when appropriate, must first be applied.

Substrate with a minimum 25 N/mm<sup>2</sup> compressive strength and 1.5 N/mm<sup>2</sup> tensile strength (latter as tested to EN 1542). Perform preliminary tests on critical and unknown surfaces.

### MIXING:

Prior to use the two components, A + B, must be carefully stirred to achieve a uniform distribution of paraffin in the product.

The unpigmented/colourless part B is then completely mixed with the hardener/Catalyst (C2) (50% dibenzoyl peroxide), in accordance with the following guidelines. It should be noted that the amount of Catalyst (C2) powder to be added depends upon the application temperature.

The mixing and the immediate spray application of the two components A + B should be carried out at the latest 10 hours after the hardener has been added to Part B.

At lower temperatures the pot life is extended, at higher temperatures and when increasing the hardener quantity, the pot life is shortened.

### Remark:

#### Guidelines for Catalyst (C2) addition to WP855 Matacryl Machine

Temperature	Weight percentage Catalyst (C2) Calculated on part B	Gram Catalyst (C2) per 25 kg part B
30°C	2.2%	550 g
20°C	3.0%	750 g
10°C	4.4%	1100 g
0°C	7.4%	1850 g
< 0°C	7.4%	1850 g

The optimal product temperature is 15-20°C.

At temperatures below 0°C, the Accelerator should also be added.

For further information contact our technical department.

### Conversion:

1 cm<sup>3</sup> of Catalyst (C2) = 0.64 g

1 g of Catalyst (C2) = 1.57 cm<sup>3</sup>

Add the required amount of Catalyst (C2) to the resin and additive mix. Mix with slow speed drill and helical spinner, taking care not to entrain air.

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### APPLICATION:

Matacryl Machine is designed to be spray applied using two component (1 : 1 by volume) high pressure pneumatic airless mixing and spray equipment such as a 60 : 1 Graco Style Double Pump with superchargers capable of handling two component resin formulations with a pressure between 80 and 150 bar. The nozzle size shall be 0.8-1.5 mm with an angle of 20-50°. It is not recommended to heat up the material while processing/pumping. After application the pump can be cleaned with Cleaner. The pump can be stored by blowing dry and filling with maintenance oil.

By mixing parts A and B of Matacryl Machine a manual application quality is achieved. You can add up to 5% Thinner to improve the flow.

Repair of defects (Pin/blow holes):

Identified pin/blow holes shall be overcoated with an additional minimum wet film thickness of 2.2 mm.

Exceed the minimum application layer thickness to allow a continuous, unbroken resin film, which ensures full through cure.

### COVERAGE:

Per layer of membrane, a thickness of 1mm (= 1.3-1.4 kg/m<sup>2</sup>) should always be applied.

Note: Layers up to 4 mm can be applied in a single application.

### CURING:

Can be walked on after 1 hour at 20°C. Full chemical cure after 2-3 days.

### CLEANING:

Clean tools with cleaner or solvents (MEK, acetone) immediately after application, cured remains can be removed only by mechanical means.

### HEALTH AND SAFETY:

Follow the appropriate Occupational Health and Safety guidelines applicable to the location where the application is undertaken.

Safety Data Sheet (SDS) must be read and understood before use.

Ensure proper ventilation of product application areas. Use proper skin, eye and respiratory protection. Matacryl Machine is highly flammable; keep away from heat and all sources of ignition and do not smoke. The stirrer as well as all other electric appliances used on the application site must be explosion-proof versions.

### WARRANTY:

Tremco CPG (Country) warrants all goods to be free from defects and will replace materials proven to be defective but makes no warranty as to appearance of colour. The information and recommendations herein are believed by Tremco CPG (Country) to be accurate and reliable.

### 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
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