



Matacryl® MANUAL

SEAMLESS WATERPROOFING MEMBRANE

Product Description


Matacryl® Manual is a medium viscosity, urethane-modified, pre-reacted 100% solids membrane system based on acrylic monomers. It is part of an innovative waterproofing system that supports tight completion timelines of projects and ensures long-term performance and resilience. Matacryl Manual is an easy to apply, highly elastomeric liquid waterproofing membrane and coating. It can be applied at a range of ambient and substrate temperatures from -20°C to 35°C onto cementitious based screeds, concrete, filled bitumen/asphalt, metal, ceramic tile and wood substrates.

Features and Benefits

- Fully cured one hour after application
- Rapid cure allows quick installation, regardless of temperature, enabling wintertime installations
- Highly-flexible crack-bridging membrane with excellent performance characteristics, even at -30°C
- Excellent adhesion to a variety of substrates
- Unique chemistry facilitates easy repair solutions
- Easy to apply using a roller or squeegee
- No time limit or additional preparation required for subsequent membrane applications
- Excellent chemical, abrasion, impact and puncture resistance
- Withstands movement and stress in the substrate
- Thixotropic version for vertical surfaces

Waterproofing Applications

- Bridge decks (concrete and steel)
- Civil engineering structures and underground slabs
- Concrete and metal rail bridges and under track ballast
- Pedestrian and vehicular bridges and walkways
- Tunnels, channels and dam structures
- Waterproofing containment tanks including waste and contaminated materials storage

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Universal Sealants (UK) Ltd, Kingston House, 3 Walton Road, Pattinson North, District 15, Washington, Tyne & Wear. NE38 8QA 13 1119-CPR-1190	
EAD 0303675-00-0107 Liquid Applied Bridge Deck Waterproofing Kit EN1504-2 Surface Protection System Coating	
Bond Strength to Support	3.04 MPa
Capacity to Bridge Cracks	Watertight
Resistance to Perforation	Pass (I4)
Resistance to Heat Ageing; Tensile Stress	8.8 MPa
Resistance to Heat Ageing; Elongation	269%
Resistance to Heat Ageing; Bond Strength	4.21 MPa
Bond Strength to Overlay; Mastic Asphalt	1.27 MPa
Bond Strength to Overlay; Asphalt Concrete	1.23 MPa
Abrasion Resistance (Taber Test)	<3000 mg
Permeability to CO ₂	S _D > 50 m
Reaction to fire	Efl



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Technical Data*

PROPERTY	TEST METHOD	VALUE
Viscosity @ 25°C	DIN 53019	490-830 mPa·s
Density @ 25°C	ISO 2811	1.3 g/ml
Curing Time @ 20°C		approx. 60 minutes
Elongation @ 24°C	DIN EN ISO 527	> 280 %
Tensile Strength @ 24°C	DIN EN ISO 527	> 10 MPa
Shore A Hardness	DIN EN ISO 868	87
Shore D Hardness	DIN EN ISO 868	35
Dynamic Crack Bridging @ -26°C	ASTM C 1305	≥ 3.2 mm
Bond Strength to Support		3.04 MPa
Resistance to Perforation		Pass (I4)
Resistance to Heat Ageing; Tensile Stress		8.8 MPa
Resistance to Heat Ageing; Elongation		269%
Resistance to Heat Ageing; Bond Strength		4.21 MPa
Bond Strength to Overlay; Mastic Asphalt		1.27 MPa
Bond Strength to Overlay; Asphalt Concrete		1.23 MPa

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

INSTALLATION INSTRUCTIONS

Surface Preparation

- To prime, substrates must be dry, firm, solid and free of dust, grease, oil and loose particles. 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. Newly poured concrete must have reached adequate strength to receive Matacryn system.
- Before the application of the Matacryn Manual, a suitable Matacryn Primer, including sand-scatter when appropriate, must first be applied.
- Substrate moisture content should be <6%
- See Model/or Project Specifications for further details. For further details, contact the Technical Department.



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Mixing

- Prior to use, Matacryn Manual must be carefully stirred to achieve uniform distribution of the paraffin in the product, normally a minimum of three (3) minutes.
- Using a variable speed drill with helical stirrer, Matacryn Manual is thoroughly mixed together with Matacryn Reactive Filler (25% dibenzoyl peroxide) or Matacryn Catalyst (50% dibenzoyl peroxide), in accordance with the following guidelines. The amount of Matacryn Reactive Filler/Matacryn Catalyst to be added depends on the substrate temperature.

TEMP °C	MATACRYL REACTIVE FILLER	MATACRYL CATALYST	MATACRYL ACCELERATOR
<0	12% by weight of resin	6% by weight of resin	1-3% by weight of resin
0	10% by weight of resin	5% by weight of resin	n/a
10	8% by weight of resin	4% by weight of resin	n/a
20	4% by weight of resin	2% by weight of resin	n/a
30	2.2% by weight of resin	1.1% by weight of resin	n/a

Note: For safety reasons, Matacryn Accelerator must be added to reactive resin PRIOR to adding any Matacryn Reactive Filler/Matacryn Catalyst. See TDS Matacryn Accelerator for more details.

Application

Matacryn Manual is manually applied using a roller or squeegee. For the consumption of product per m², please consult the System Build Up Sheets.

A minimum thickness of 1mm (1.3kg/m²) per layer of membrane should always be applied. If extending an existing Matacryn application, the new membrane should overlap by a minimum of 50mm.

- Do not apply when surface temperature is above 40°C and/or rapidly rising. Special care must be observed if area is exposed to direct sunlight.
- Substrate temperature must be at least 3°C above actual dew point and rising.
- The recommended substrate temperature is 0 – 25°C, but no less than -10°C and to a maximum of 30°C.
- The temperature of the substrate should exceed the “dew point” by 3°C during application and hardening.
- In closed rooms a forced ventilation with at least 7-fold air exchange per hour is recommended.
- For application temperatures below -10°C, please consult the Technical Department.

The techniques involved may require modification to adjust to job-site specific conditions. Consult your USL Speciality Products Sales Representative or USL Technical Services for site conditions and requirements. For further installation details, see our General Preparation and Application Guidelines for “Matacryn Systems”.

Cleaning

Clean all mixing equipment and tools regularly and immediately after use with Acetone.

Packaging

Matacryn Manual is available in 25kg metal pails
BPO hardener catalyst is available as 25kg box

Both above parts are required

Acetone is available in 20 litre drums



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Storage

Shelf life is 12 months for resin and 6 months for BPO when stored in original unopened packs in a cool and dry place.

The date of manufacture is given on the label.

Storage temperature between 5°C and 40°C out of direct sunlight. Optimal storage temp: 15°C to 20°C.

Flash point + 12°C.

Protect from frost, adverse weather and moisture / contaminant ingress.

Health and Safety

Suitable protective clothing, gloves and safety goggles must be worn during mixing and application.

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.

Highly flammable; keep away from heat and all sources of ignition and do not smoke. All electric appliances used on the application site must be explosion-proof versions.

For further information see our Material Safety Data Sheet. Safety Data Sheets (SDS) are available from USL and are provided to help customers satisfy their safe handling, use and disposal needs as well as assist with any conformance requirements made locally by health and safety regulations.

SDS are continually updated to provide the latest information to our customers. We therefore recommend contacting our head office to obtain the most recent and accurate SDS before handling and using any product

Warranties and Disclaimers

Hychem warrants that this product shall conform to the technical specifications published in the product literature. The quality and fitness of the product is dependent upon the proper use and application of the product by the applicator. Hychem has no role in the application of the finished polymer other than to manufacture and supply its components. It is vital that the person applying this product understands the product and is fully trained and certified in the use of spray equipment and application of sol-gel materials. There are no warranties that extend beyond the description on the face of this instrument, except when provided in writing, directly by Hychem and executed under seal by a company officer.

Field Support

Field support where provided, does not constitute supervisory responsibility. Suggestions made by HYCHEM either verbally or in writing may be followed, modified or rejected by the owner, engineer or contractor since they and not HYCHEM are responsible for carrying out procedures appropriate to a specific application.

Customer Responsibility

The technical information and application advice given in this publication is based on the best information available at the time of print. As the information herein is of a general nature, no assumption can be made as to the product suitability for a particular use or application and no warranty as to its accuracy, reliability or completeness either expressed or implied is given other than those required by Commonwealth or State Legislation. The owner, his representative or the contractor is responsible for checking the suitability of products for their intended use.