

PL1

Elastic single-component polyurethane coating with excellent tear and abrasion resistance, UV-resistant.

 TROWEL APPLICATION
  ROLLER APPLICATION
  AIRLESS APPLICATION
  FOR INDOOR AND OUTDOOR USE
  SINGLE-COMPONENT PRODUCT
  UNI EN 1504 -2

 ANTI-CARBONATION
  PRODUCT FOR SPECIALISTS
  HIGH ELASTICITY
  ECONOMIC
  WALKABLE
  ABRASION RESISTANT

 UV-RESISTANT
  SUPERIOR ADHESION
  HIGH CRACK BRIDGING
  READY-TO-USE
  WATER STAGNATION RESISTANT
  WEATHER RESISTANT



Use this QR code for further details on application modalities, safety sheet and other information.

203 Product code



Technical characteristics

Type of product UNI EN 14891	Liquid waterproofing products
Initial adhesion EN 14891	0.5 MPa
Adhesion after immersion in water UNI EN 14891	0.5 MPa
Crack bridging ability EN 1062-7 Method A, static Method B, dynamic	A5 (23°C) > B4.1 (23°C)
Elongation at break EN 12311-2	> 450 %
Grip force for direct traction EN 1542	4 MPa

Type of mortar EN 1504-2	Concrete surface protection systems
Permeability to CO2 EN 1062-6	s _D > 50 m
Degree of water vapour transmission UNI EN 7783-2	s _D < 5 m
Impact resistance EN ISO 6272	4 N·m
Hardness for Shore D penetration UNI EN ISO 868	D > 70
Free water permeability coefficient by capillarity UNI EN 1062-3	w < 0.1 kg·m ⁻² ·h ^{-0.5}

Description

Tradielastic PL1 is a single-component, moisture-curing, ready-to-use, single-component polyurethane liquid membrane that can be applied cold or with spraying systems, with high elasticity even at low temperatures and high UV resistance. Suitable for coatings and roofing once cured,

creates a continuous, waterproof and durable system. Tradielastic PL1 meets the minimum requirements of EN 1504-2 ("Concrete Surface Protection System").

Physical characteristics

Package	25 / 4 kg
Consistency	liquid
Apparent density of the powder	1.57 ± 0.05 kg/l
Colour in the can	Grey
Hardening (22°C, 50 % R.H.)	
- Dry to the touch	7 - 9 hours
- Insensitive to rain	7 hours
- Overlapping	maximum 24 hours
- Complete curing	10 days

UV resistance (INVE 2000) lamp P-500W (50 h at 70°C)	Excellent
Residual moisture of the substrate	< 4 %
Operating temperature	-40 °C / +80 °C
Temperature of use	+5 °C / +35 °C
Storage period	6 months in the original sealed packaging in a dry place

Fields of application

Tradielastic PL1 is used for waterproofing:

- Balconies; terraces, roofs, stairways, building coverings in general;
- Protective, waterproof coating for non-trafficked concrete structures;
- Bituminous membranes;
- Existing flooring.

Substrate preparation

The substrate must be clean, free of dust, grease, oil, dirt, coatings, etc., which may impede adhesion. Remove brittle or loose parts mechanically. The cement substrate must be sound and compact and have a tear resistance of at least 1.5 MPa. Free, standing water from the subfloor or from previous washing operations or weather events must be removed or dried by suitable means. Old bituminous membranes must be mechanically cleaned by removing all deformations.

Possible repairs can be carried out with it. Any levelling can be done with polyurethane foam. In any case, it is necessary to prepare the floor by sandblasting, milling, shot peening, polishing or sanding, depending on the type of surface.

Pay close attention to structural or distribution joints. Before applying the protective coating, create an omega support with elastic butyl tape or TNT.

Product preparation and application

Ready-to-use single-component product after homogenisation by means of a drill at low speed. If necessary, it is possible to dilute to a maximum of 5%, exclusively with PL6 DL. Do not use diluents containing reactive groups, such as alcohols. Inappropriate diluents cause the product not to harden. Can be applied by brush roller or airless. Apply the second coat no more than 24 hours after the previous coat when this is already dust-free, working in a crosswise direction to the previous coat. It is recommended not to apply Tradielastic PL1 in layers

thicker than 0.6 mm per coat.

The application cycle involves four layers:

- 1) PL5 primer with consumption of 100 g/m²
- 2) First coat of Tradielastic PL1 with consumption of 0.5 kg/m²
- 3) Second coat of Tradielastic PL1 with consumption of 0.8 kg/m²
- 4) Third coat of Tradielastic PL1 with consumption of 0.8 kg/m²

If a surface suitable for subsequent tiling is required, quartz can be sprayed over the still-wet product surface.

Advantages

High deformability

Waterproofing with Tradielastic PL1 is a highly elastic and flexible polymeric system based on polyurethane resins with excellent technical properties that support high-performance applications. The polyurethane nature

of the product guarantees excellent workability, which, combined with its considerable elasticity, makes it able to withstand the movements of the substrate.

Excellent adhesion

Unlike traditional elasto-cement waterproofing, which are ineffective and unstable on a large number of deformable substrates, including bituminous sheaths, for example,

Tradielastic PL1 has a polyurethane-based polymer matrix and offers good adhesion to most substrates.

Specification item

Waterproofing coating for roofing: terraces, balconies, roofs and concrete structures not subject to traffic; protective for engineering structures not subject to traffic; adheres to concrete, bituminous waterproofing membranes, bricks and ceramic roofing. Type Tradielastic PL1 by Tradimalt S.p.A.

The product must have the following performance characteristics: Grey colour | solid content > 90 %;). Elongation at break (EN 12311-2) 450 %. Operating temperature -40 °C /+ 80 °C. Certified according to EN 1504-2.



REA no. 1286854 for

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UNI EN 1504-2

Tradielastic PL1

Liquid applied waterproofing product, coating (C) for the protection of concrete by means of protection against penetration risks, moisture control and increased resistivity.

Permeability to CO₂: s_D>50 m

Permeability to water vapour: s_D<5 m

Capillary absorption and water permeability: w<0.1 kg/(m²xh^{0,5})

Dangerous substances: See SDS



This is Tradimalt's way of communicating, in its information and technical-commercial material, the composition of each product and some of the product's key features. Therefore, the focus is on supply chain transparency, not required by any relevant regulation but which Tradimalt nevertheless intends to offer to its customers in order to emphasise the quality of the raw materials, and thus of the product, as well as the safety that the company intends to demonstrate with regard to formulations. The focus is therefore in the "transparency" that the company intends to manifest in the supply chain, which is not required by any current formulation law.

Raw materials contained in the product

Selected raw materials:

Polyurethane resin with a low elasticity modulus, with technical characteristics that make the product stable even at very low temperatures.

Warnings

- Do not expose uncured material to direct sunlight or other heat sources.
- Do not apply Tradielastic PL1 in layers thicker than 0.6 mm per coat. Excessive film thickness can result in blisters.
- The material in open packages must be used immediately, as it creates a hardened film in 1-2 hours.
- When applying this product, it is advisable to wear goggles, rubber gloves and all the PPE required by the regulations on the use of chemicals.
- Clean all instruments and equipment with PL6 DL thinner immediately after use. The hardened material can only be removed mechanically.
- For any information and advice on safety regulations and for use or storage, the user must refer to the latest Safety Data Sheet, containing physical and toxicological data and all other relevant safety data.
- Store the product in its original sealed packaging in a dry place away from sunlight at temperatures between +5 °C and +25 °C for 6 months.

The technical-practical information contained in the technical data sheet is the result of our most accurate and detailed scientific research and experience in the field. However, since we cannot directly influence the site conditions and the execution of the work, this information is to be considered non-binding and therefore not legally or otherwise mandatory for third parties. This information does not exempt the end user from their responsibility to test our products in order to ascertain their suitability for the intended use. We therefore strongly advise the customer/applicator to carry out the appropriate preventive tests of Tradimalt products so that their suitability can be ascertained.