PRODUCT TECHNICAL DATA SHEET

PU 110

Single-Component, UV -Resistant, Polyurethane Waterproofing Liquid Membrane

DESCRIPTION
PU 110 is a single component, easy to apply, polyurethane based liquid waterproofing membrane.

APPLICATION AREAS
- Irrigation channels
- Parking areas
- Asphalt membranes
- Gypsum and cement boards
- Exposed roofs (not covered with any finishing layer)
- Interior and exterior application areas
- Terraces, verandas, and balconies
- Wet areas under coverings (bathrooms, kitchens, etc.)

FEATURES AND ADVANTAGES
- Certified according to ETAG 005 (W3 performance category).
- Easy to apply (by brush, roller, or spray).
- Forms a seamless and joint-free film layer, preventing leakage and weak points.
- Exhibits excellent resistance to continuous water exposure.
- Maintains its mechanical properties between -40°C to +90°C.
- Provides effective water vapor permeability; its breathable structure moisture build-up beneath the layer.
- Easily repairable with PU 110 if the membrane is damaged.
- Excellent UV resistance.
- High chemical resistance.
- Cures upon contact with ambient humidity, forming a durable and elastic film layer.

SUBSTRATE STANDARDS
- Concrete Class: Minimum class C20/25
- Moisture Content: Maximum < 5%
- Application Temperature: Between +5°C and +35°C
- Relative Humidity: < 85% yaz

APPLICATION PROCEDURE

• SURFACE PREPARATION
All contaminants that may reduce adhesion such as oil, grease, paraffin residues, cement laitance, loose particles, form release agents, and fully cured old membranes must be completely removed from the substrate prior to application. After cleaning, the surface should be washed with high pressure water and thoroughly dried. Any surface defects must be repaired using appropriate repair products.

• PRIMING
PU PRIMER 200 or ClvSeal EP PRIMER 617 must be used on absorbent substrates such as concrete, cement or screed, ClvSeal EP PRIMER 625 is preferred on damp substrates, and PRIMER T is required on nonabsorbent substrates such as metal or ceramic; please refer to the primer table for detailed information.

• APPLICATION
The container must be opened and mixed with a lowspeed mixer for 2-3 minutes. For spray application, add CLEVER 001 at a maximum ratio of 5–7%. On the previously primed surface, the product must be poured and applied by roller, squeegee or brush in a minimum of 2 coats until the entire surface is covered. After the first coat has been applied, the second coat must be applied after a minimum of 6 and a maximum of 24 hours. If the second coat cannot be applied within the specified time, consult the CLEVER POLYMERS technical office for information and solutions before proceeding. To accelerate drying in cold weather, the use of ACC CATALYST is recommended if desired. Consult our technical department for dilution.

APPLICATION REMARKS
- Increasing the durability and service life of polyurethanebased waterproofing products applied on uncovered, exposed outdoor areas or areas exposed to pedestrian traffic requires coating the surface with PU 650 TC1K aliphatic flexible top coat.
- Not recommended for unsound surfaces.
- Not suitable for the waterproofing of swimming pools containing chemically treated water.

CONSUMPTION
- First Coat (min.): 0.70-0.90 kg/m^2
- Second Coat (min.): 0.70-0.90 kg/m^2
- Spray Application (per coat): 0.75-0.90 kg/m^2
- Total Consumption (minimum): 1.40-1.80 kg/m^2

PACKAGING
5 kg and 25 kg metal pails, white and grey.

CLEANING
Clean all tools with CLEVER 001 after application. Rollers are single-use and must not be reused.

STORAGE AND SHELF LIFE
12 months if stored in its unopened, original packaging at temperatures between +5°C and +25°C. Once opened, the product should be used as soon as possible.

SAFETY&HEALTH
The product must be used only in wellventilated areas. It must not come into contact with open flames. Smoking is strictly prohibited during application. Protective gloves, safety goggles, and a mask must be worn during use. In case of eye contact, rinse immediately with plenty of water. Adequate ventilation must be ensured throughout the application. For more detailed information, request the Material Safety Data Sheet (MSDS) from the Clever Polymers technical department

TECHNICAL SPECIFICATION

FEATURE	TEST METHOD	VALUE
Coating Type	Clever Lab.	Single-Component Polyurethane
Density	ASTM D1475/DIN 53217/ISO 2811-1 (+20°C)	1.40 ± 0.05 g/cm^3
Viscosity	ASTM D4287 (+25°C)	3000 – 6000 cp
Flash Point	ASTM D93	35°C
Water Vapor Permeability	ASTM E96	0.8 g/m^2·hour
Gloss	Clever Lab.	Semi-Gloss
Application Temperature	Clever Lab.	+5°C to +35°C
Thermal Shock	Clever Lab.	200°C – Passed
Solid Content	Clever Lab.	85% (±5)
Hardness	ASTM D2240 / DIN 53505 / EN ISO 868	60 Shore A
Elongation at Break	ASTM D412 / EN 527-3 (+23°C)	>500%
Tensile Strength	ASTM D412 / EN 527-3 (+23°C)	>6 N/mm^2
Adhesion to Concrete	ASTM D4541 (+23°C)	>2 N/mm^2
QUV	ASTM G53	2000 hours – Passed
Service Temperature	Clever Lab.	-40°C to +90°C
Initial Cure Time	25°C / 55% RH	4 hours
Recoat Time	Clever Lab.	6–24 hours
Hydrolysis (%8 KOH, 50°C – 15 days)	Clever Lab.	No Change in Elastomeric Properties
Hydrolysis (H_2O, 30 days, 60–100°C Cyclic)	Clever Lab.	No Change in Elastomeric Properties
HCl (pH=2, RT – 10 days)	Clever Lab.	No Change in Elastomeric Properties
Hydrolysis (H_2O, RT - 100°C, 14 days Cyclic)	Clever Lab.	No Change in Elastomeric Properties
Thermal Resistance (80°C – 100 days)	EOTA TR011	Passed

* Viscosity was measured at +25°C in accordance with EN ISO 3219 standards. Viscosity increases inversely with temperature.

EOTA (EUROPEAN ORGANISATION FOR TECHNICAL APPROVALS) CLASSIFICATION

CRITERION	PU 110	PU 110
Predicted Minimum Working Life	W3 (25 years)	W2 (10 years)
Climatic Zone	S (severe climatic conditions)	S (severe climatic conditions)
User Load	P1	P3
Roof Slope	S1–S4	
Minimum Surface Temperature	TL3 (–20°C)	TL3 (–20°C)
Maximum Surface Temperature	TH4 (90°C)	TH3 (80°C)
External Fire Exposure	Broof (t1, t4)	Broof (t1, t4)
Reaction to Fire	Class E	Class E

TS EN 1504-2

NOTE: This document does not constitute a product description; all information is provided in good faith. Since application conditions are beyond the control of the manufacturer, the information herein is not covered by any warranty. Whether explicit or implied, the user is solely responsible for the final evaluation of suitability, the intended material use, method of application, and determining whether any patent infringement may occur.The manufacturer assumes no responsibility for coverage/consumption rates, performance, or any damage related to the use of the product. For detailed recommendations and advice regarding special application conditions, please contact Clever Polymers. This technical document remains valid until a new version is issued, and previous editions become void.

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