

# CLEVERPROOF - PU110 PLUS

## SINGLE COMPONENT, LOW VISCOSITY, POLYURETHANE BASED, LIQUID WATERPROOFING MEMBRANE

### DESCRIPTION:

CLEVERPROOF PU 110 PLUS is a one component, low viscosity, polyurethane based, liquid waterproofing membrane. Creates a durable and elastic layer by curing with the humidity in the air. PU110 PLUS is suitable for spraying application due to its low viscosity.

### TYPICAL APPLICATIONS:

- ✓ Car Parks,
- ✓ Irrigation Channels,
- ✓ Asphalt membranes,
- ✓ Bridge Platforms,
- ✓ Stadium tribunes,
- ✓ Gypsum and cement panels,
- ✓ Terraces, verandas and balconies,
- ✓ Roofs exposed to UV
- ✓ Wet areas under the coating (bathroom, kitchen, etc.)

### FEATURES AND ADVANTAGES:

- ✓ Easy to apply (brush, roller or spray).
- ✓ When applied, it creates a single-piece layer that does not allow joints or leakages.
- ✓ It is resistant to continuous water contact.
- ✓ It maintains its mechanical properties between  $-40^{\circ}\text{C}$  and  $+80^{\circ}\text{C}$ .
- ✓ It is permeable to water vapor. Since it has a breathing structure, it does not cause moisture accumulation under the layer.
- ✓ When the material is damaged, it can be repaired quickly with PU110 PLUS.
- ✓ Provides excellent adhesion to the surface.
- ✓ It has excellent UV resistance.
- ✓ It has excellent chemical resistance.
- ✓ Its white color reflects the solar energy to a great extent and prevents the temperature rise of the building under the floor on which it is applied noticeably from increasing.
- ✓ It has excellent mechanical properties, tear and tensile strength.
- ✓ Does not contain toxic substances after fully cured.

### CONCRETE SUBSTRATE STANDARTS:

- ✓ Hardness R28 : 15 Mpa
- ✓ Humidity : W <10%
- ✓ Temperature :  $+ 5^{\circ}\text{C}$  and  $+ 30^{\circ}\text{C}$
- ✓ Relative Humidity : <85%

For detailed information, please consult our technical department.

### APPLICATION PROCEDURE:

#### SURFACE PREPARATION:

Before the application, the adherence and adhesion weakening factors such as oil, grease, paraffin waste, cement grout, loose particles, mold release agents, cured old membranes should be removed from the surface. After washing the surface with high pressure water, it should be free from damp. Surface defects and cracks should be repaired with suitable products.

#### PRIMING:

Suitable CLEVERPRIME primers shall be used for priming. For absorbent surfaces such as concrete, cement or screed where surface moisture is < 5%; use PU PRIMER 200 or EPOXY PRIMER, for moist surfaces; use PU PRIMER 300-2K or EPOXY PRIMER WB and for non-absorbent surfaces such as metal, ceramic or old coatings use EPOXY PRIMER WB GLOSSY.

#### APPLICATION:

Before use, the package should be opened and mixed with a low speed mixer for 2-3 minutes. For spray application, add Solvent 01 at a maximum rate of 5%-7%. The previously primed surface should be applied with a roller or brush until the entire surface is covered, by pouring the product in at least two layers. After the first coat is applied, the second coat should be applied in minimum 6 and maximum 24 hours. If the application of the second layer has not been made within the specified time, before application please consult to the technical office of CLEVER POLYMERS for information and solutions. If needed, in order to increase the acceleration of drying process in cold weather, It is recommended to use ACC CATALYST. Consult our technical department for thinning.

### APPLICATION REMARKS:

- ✓ It should be covered with PU 650 TC-1K Aliphatic flexible top coat material in order to extend the strength and service life of polyurethane-based waterproofing products which are applied to areas exposed to open air conditions or pedestrian traffic.
- ✓ Not recommended for loose and unstable surfaces.
- ✓ It is not used for waterproofing of swimming pools with chemically treated water.

### CONSUMPTION:

- ✓ First Layer (min.) : 0,75 - 0,90 kg/m<sup>2</sup>
- ✓ Second Layer (min.) : 0,75 - 0,90 kg/m<sup>2</sup>
- ✓ Airless spray (for each layer) : 0,75 - 0,90 kg/m<sup>2</sup>
- ✓ Total Consumption (min.) : 1,50 - 1,80 kg/m<sup>2</sup>

**CLEANING:**

After the application, all tools used should be cleaned with the appropriate Clever 001. Roller brushes are disposable - They are only for single use.

**PACKAGING AND COLOR:**

It is white color and in 5 kg and 25 kg metal buckets.

**STORAGE AND SHELF LIFE:**

The product can be stored for a maximum of 12 months in its unopened original package at temperatures between + 5°C and +25°C. Opened product should be used as soon as possible.

**PRECAUTIONS:**

The product should be used in well ventilated environments. The product should not be in contact with open fire. Smoking should not be allowed during application. Protective gloves and masks should be used for hands and eyes during application. If the material comes into contact with eyes, it should be washed immediately with sufficient water. Adequate ventilation is required during application. For more detailed information, ask for Safety Data Sheet (MSDS) from CLEVER POLYMERS technical department.

**TECHNICAL DATA:**

QUALIFICATION	METHOD	FEATURE
Coating Type	Clever Lab.	One-component Polyurethane
Density	ASTM D 1475 / EN ISO 2811-1 (+20°C)	1,40 (±0,05) gr / cm <sup>3</sup>
Viscosity	ASTM D 2196-86 / EN ISO 3219 (+25°C)	2000 - 5000 cp
Water Vapor Permeability	ASTM E96	0,8 gr / m <sup>2</sup> hour
Glossy	Clever Lab.	Semi Gloss
Application Temperature	Clever Lab.	+5°C to +30°C
Heat Resistance	Clever Lab.	100 days at +80°C
Shock Heat Resistance	Clever Lab.	200°C - Passed
Solid Content	Clever Lab.	90% (±5)
Hardness	ASTM D2240, DIN 53505, EN ISO R868	> 60 (Shore A)
Elongation at Break	ASTM D 412 (+23°C)	> 500%
Tensile Strength	ASTM D 412 (+23°C)	> 8 N / mm <sup>2</sup>
Adhesion to Concrete	TSE EN 1542 (+23°C)	> 2 N / mm <sup>2</sup>
QUV	ASTM G154	2000 hours - Passed
Service Temperature	Clever Lab.	-40°C to +80°C
Tack Free Time	25°C / 55% RH	6 hours
Recoat Time	Clever Lab.	6 to 24 Hours

\* Viscosity measured at + 25°C according to EN ISO 3219 standards. Viscosity increases inversely with temperature.

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