

POLIUREA PS-100.T

100% Pure Polyurea for the mining industry, as a useful protector of mining equipment and material processing areas.

- Industrial and production facilities.
- Protective coatings.
- Internal and external finishes of industrial process pipes.
- Mineral hoppers, silos, etc.
- Sludge tanks and pipes.
- Loading and unloading platforms.
- Mill and crusher coatings.
- Equipment subjected to high abrasion and wear
- Also suitable for hardening polystyrene EPS, XPS, CARDBOARD, CORK, etc.



PRODUCT DESCRIPTION

POLYUREA PS-100.T is a two-component sprayable membrane, 100% solid and non-harmful to the environment, 100% waterproof and protecting surfaces from wear and corrosion.

Due to its high adhesion to multiple substrates, it allows a secure and permanent bond with the surface, ensuring that it remains free of rust or corrosion with a finish that can be non-slip and in various colors.

It is an extremely durable coating due to its mechanical properties and chemical qualities. This highly resistant coating also tolerates damage from a variety of acids, alkaline chemicals, and petroleum-based products. It has excellent behavior and is bacteriologically stable, easy to clean and able to seal joints and corners.

RECOMMENDED USES

POLYUREA PS-100.T is a 100% pure polyurea coating for the mining industry, as a useful protector of mining equipment and ideal building material processing areas. With their unmatched versatility, polyureas adhere to a wide range of substrates. The wide selection of building blocks also allows the properties of PUA liners to be customized to meet the needs of different applications.

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FEATURES & BENEFITS

- Fast reaction and curing time.
- Almost immediate commissioning time.
- 100% solids.
- Excellent crack bridging properties.
- High resistance to solvents, acids and bases (consult the technical department).
- Excellent corrosion protection.

PRESENTATION

The ***POLYUREA PS-100 system. T*** comes in two formats:

Part A ISOCYANATE: Metal drum of 50, 220 Kg.

Part B RESIN: Metal drum of 50, 210 Kg.

Part C PIGMENT: Buckets of 1.5 Kg.

Standard Colors: Red-Tile 3009, Grey 7012, White 9003, Blue 5012 and 5017, Green 6010, Suede 1002, Black 9005, also custom-made according to RAL Letter Request:

TECHNICAL DATA

PROPERTIES	Component A (Iso)	Component B (Poliol)
Specific gravity g/cm ³	1,112	1,23
Yarn Time		5
Viscosity mPas (cp)	775	650
Storage (unopened)	Maximum 12 months	Maximum 12 months
Mix-to-weight ratio	90	100
Mix-to-volume ratio	80,93	80,94

Temperature is lower, curing times could increase.

MECHANICAL PROPERTIES OF THE MEMBRANE

	VALUE	
Property		
Component A		
Solids content	%	100
Density	Kg/m ³	1,1
Viscosity at 25 °C	c.p.s.	750
Component B		
Solids content	%	100
Density	Kg/m ³	1,2
Viscosity at 25 °C	C.P.S.	850
Cured membrane		
Adhesion to concrete		Overcome cohesion
Elongation %	% UNE 53510	337
Material	ELASTOMERS	PUA
Dureza, Shore A		94
Dureza, Shore D		45
Tensile force to tear	N/mm UNE 53516	26
Tensile strength	MPa UNE 53510	16,5
Abrasion resistance	Mm ³ UNE 53527	232
Temperature Resistance	°C	160 hours /180°C
Recommended thickness		Minimum 600 microns
Total Curing		7 days

METHOD OF APPLICATION

The system is applied with a high-pressure spraying equipment (14-20 MPa / 2000-3000 psi), with a fixed volumetric ratio of 1:1 and provided with a heating system in the hoses, which keeps the temperature stable during spraying. It is important that the temperature in the gun is 65 to 70°C. The system should be designed only on clean, dry surfaces free of particles from other sources. The product has optimal adhesion on rough surfaces.

It is recommended to apply a coat of primer before spraying the **POLYUREA PS-100 polyurea system. T** to ensure adherence. The application of primer-free polyureas on satin surfaces can present adhesion problems.

Due to its aromatic nature, it is recommended for indoor applications; if the use is outdoors, a PAVIFER-400Flex aliphatic polyurethane protection layer should always be applied once the membrane is at room temperature.

It can be applied in conditions of high ambient humidity. Do not apply if the wind speed exceeds 20 km/h.

For roof maintenance, the minimum application thickness must be 1.4 mm (consumption of 1.7 kg/m²). For maintenance of machinery and equipment, and pedestrian traffic, the minimum application thickness must be 2.6 mm (consumption of 2.9 kg/m²). Do not exceed 1 mm thickness per pass.

SUPPORT TREATMENT

For different substrates, the following primers are recommended:

- For concrete, **PAVIFER-303** or **PS PRIMER is recommended**
- For ceramic tiles, **PAVIFER-305 is recommended**
- For galvanized steel, the **ZINC-RICH EPOXY PRIMER is recommended.**

Cementitious substrates:

New concrete must be cured for at least 28 days and must have a pull-out strength ≥ 1.5 N/mm². Cementitious or mineral substrates should be mechanically prepared using abrasive cleaning or scarification equipment to remove the surface grout layer and to achieve an open-textured surface. Any loose particles and weak concrete should be removed, and defects such as cokers and gravel nests should be left completely exposed. Support repairs, joint filling, gravel nests, and surface leveling must be carried out with the appropriate products.

Any sharp elements should be removed, e.g. with sanding. Degassing is a natural phenomenon of concrete that can produce bubbles in the following layers that are applied. Moisture content, air trapped in the concrete, and surface finish should be carefully checked before beginning any application work. Installing the membrane when the temperature is down or stable can reduce outgassing. Therefore, it is generally beneficial to apply the embedded layer in the afternoon or evening. Print the media and always use a reinforced system.

Brick:

Mortar joints should be sturdy and preferably a cleaning will be carried out.

Slate, tile, etc.:

Make sure all pieces of slate/tile are sturdy and firmly attached, replace broken or missing pieces. Vitrified tiles must be sanded before priming and then treated with **POLYUREA PS-100.T**

Bituminous membrane:

Make sure bituminous membranes are firmly bonded or mechanically attached to the substrate. Bituminous membranes should not have any degraded area. Always print and use a fully reinforced system.

Metals:

Metals must be strong. Exposed surfaces should be prepared until a Shiny metal surface. Use localized reinforcements over joints and fasteners.

Wooden supports:

Wooden supports and wood panels must be in good condition, firmly adhered or mechanically fixed.

Paints & Coatings:

Make sure the existing material is sturdy and firmly attached. Remove any oxidized layers and use localized reinforcements over the joints.

SUBSTRATE PREPARATION (primer)

These figures are theoretical and do not include any additional material, surface porosity losses, surface irregularity, variations in leveling and losses, etc.

Support	Primer	Consumption
Cementitious (wet) substrates	PAVIFER-305 diluted with 5% water	≈ 250 g/m ²
Cementitious (dry) substrates	PAVIFER-303 diluted with 5% epoxy solvent	≈ 250 g/m ²
Brick & Stone	PAVIFER-303 diluted with 5% epoxy solvent	≈ 150 g/m ²
Tile, non-vitrified ceramic	PAVIFER-305 diluted with 5% water	≈ 200 g/m ²
Bituminous membrane	PAVIFER-305 diluted with 5% water	≈ 150 g/m ²
Bituminous coatings	PAVIFER-305 diluted with 5% water	≈ 150 g/m ²
Ferrous or galvanized metals, Lead copper, aluminum, brass, or stainless steel	ZINC-RICH EPOXY PRIMER	≈ 200 g/m ²
Wooden supports	PAVIFER-305 diluted with 5% water	
Paints	Subject to adhesion and compatibility testing	

EC DECLARATION OF CONFORMITY

It complies with the requirements of **ETE 15/0332**.

Levels of use categories according to ETAG 005:

Outdoor Fire Behavior	Broof (t1, t2, t3 o t4) Froof (t1, t2, t3 o t4) NPD: soporte de XPS
Fire Rating	F
Life:	W2
Climatic zones:	S (Severe)
Usage Loads:	P1 to P2 with a minimum thickness of 1.4 mm (1.7 kg/m ²) P3 with a minimum thickness of 2.6 mm (2.9 kg/m ²)
Slope of the cover:	S1 to S4
Minimum Surface Temperature:	TL2, -10°C
Maximum Surface Temperature:	TH4, +90°C

LEGAL NOTICES

This information and, in particular, the recommendations regarding the application and end use of the product are given in good faith, based on the current knowledge and experience of POLIUREA SISTEMAS of the products when they are properly stored, handled and applied, in normal situations, within their useful life, in accordance with the recommendations of POLIUREA SISTEMAS. In practice, the possible differences in materials, substrates and actual conditions at the place of application are such that no warranty in terms of merchantability or fitness for particular purposes, nor any obligation whatsoever outside of any legal relationship that may exist, can be inferred from the information herein, nor from any other written advice or advice offered.

The user of the products must carry out the tests to verify their suitability according to the intended use of POLIUREA. SISTEMAS reserves the right to change the properties of its products. The property rights of third parties must be respected. All orders are accepted in accordance with the terms of our current General Terms and Conditions of Sale and Supply.

Users should be aware of and use the latest and most up-to-date version of the local Product Data Sheets, copies of which will be sent to anyone upon request, or can also be obtained on the www.poliureasistemas.com