POLYWAP 9501 SHIELD PU 500 1 – K

E-CATALOG

SINGLE COMPONENT, POLYURETHANE BASED, 500 % FLEXIBLE LIQUID WATERPROOFING MEMBRANE



DESCRIPTION FOR IT

It is a single component, low viscosity, polyurethane based liquid waterproofing and protective material with 500% elasticity. It cures via atmospheric moisture and adheres strongly to almost any type of surface, forming a highly elastic and durable film. As it contains a low level of solvent (xylene), no thinning is required. Its composition is based on pure elastomeric, hydrophobic polyurethane resins and special inorganic fillers, which provide the material with excellent resistance against uv radiation and other natural elements, as well as chemical, mechanical, and thermal stresses. It is applied in two coats using a brush, roller, or airless spray machine.

AREAS OF USE

It is used for the waterproofing of gypsum and cement panels, bathrooms, verandas and balconies, roofs, lightweight roofs made of metal or fiber cement, bituminous membranes, epdm membranes, stadium stands, parking lots, and bridge decks.

LIMITATIONS

Not recommended for unsound substrates. Not to be used for waterproofing swimming pools where surfaces are in contact with chemically treated water.

ADVANTAGES

It adheres perfectly to almost any type of surface, whether a primer is used or not. It does not require thinning. It offers excellent weather and uv resistance. Since the white color reflects a significant portion of solar energy, it substantially lowers the building's internal temperature. It possesses excellent thermal resistance; the product never softens. The maximum service temperature is 80°C, and the maximum shock temperature is 200°C. It is resistant to cold: the film retains its elasticity down to -40°C. It exhibits excellent mechanical properties, including high tensile, tear, and abrasion strength. It demonstrates effective resistance to chemicals. Once cured, it contains no toxic substances. It is effective in terms of water vapor permeability: as the film is breathable, moisture does not accumulate beneath the coating. Specialized primers are available to suit virtually any type of substrate.

TOOLS USED

Hand mixer, roller, brush, airless sprayer.

APPLICATION SURFACES

Concrete, fiber cement, terrazzo, cement based roof tiles, old but well adhered acrylic and asphalt coatings, wood, corroded metal, and galvanized steel surfaces.

SURFACE PREPARATION

The surface should be cleaned, preferably using a high pressure washer; oil, grease, fuel, and paraffin residues must be removed, and the surface must be completely cleared of form release agents, cement residues, wood chips, loose particles, and cured membranes. Surface defects and cracks should be repaired by filling them with suitable products.

PRIMING

Use the suitable material recommended in the primer selection list.

MIXING AND APPLICATION

Mix for 2–3 minutes using an electric mixer operating at low speed (300 rpm).
Apply the material in at least two coats using a roller, brush, or airless spray machine. The interval between coats must not exceed 48 hours.

CLEANING

Clean the tools and equipment first with a paper towel, then wipe them with solvent. The rollers cannot be reused

CONSUMPTION

First coat: 0.8–0.9 kg/m².
Second coat: 0.7–0.9 kg/m².
For spray application: 0.8 kg/m² per coat.
Minimum total consumption: 1.5–1.8 kg/m².

PACKAGING

15 kg steel pail - 25 kg steel pail - 200 kg steel drum.

STORAGE AND SHELF LIFE

The material must be stored in a cool, dry place. When stored correctly in its original, unopened packaging, the shelf life of the material is one year for components A and B. The packaging must be protected from frost and heat. Pallets must not be stacked on top of each other during transport and storage.

STANDARD

EN 1504-2:2004 CE Certificate

TECHNICAL SPECIFICATIONS

LIQUID PRODUCT (BEFORE APPLICATION)

QUALIFICATION	UNIT	METHOD	FEATURE
Viscosity (Brookfield)	cP	ASTM D2196-86, 25°C	2700-3800
Specific gravity	Gr/cm3	ASTM D1475, 20°C	1.4-1,5
Ignition point	°C	ASTM D93, closed container	> 42
Drying time at 25°C	Hour	-	6
Re-coating	Hour	-	6-24

CURED PRODUCT (AFTER APPLICATION)

QUALIFICATION	UNIT	METHOD	FEATURE
Serving temperature	°CA	-	-40 ila 80
Maximum short-term heat (shock)	°C	-	200
Hardness	Shore A	ASTM D2240 / DIN 53505	75
At 23°C, rupture	Kg/cm2	ASTM D412 / EN-ISO-527-3	70
Elongation at 23 °C	%	ASTM D412 / EN-ISO-527-3	>500
Elongation at -25 °C	%	ASTM D412	350
Water vapor transmission	Gr/m2.hour	ASTM E96 (Su Yöntemi)	0,8
Adhesion to concrete	Kg/cm2	ASTM D4541	>20
Stress after 300% elongation	%	ASTM D412	<3
Hydrolysis (8% KOH, 15 days at 50°C)	-	-	Not added
Hydrolysis (H2O, 30 days / 60–100 °C)	-	-	Not added
Hcl (pH = 2, 10 days at RT)	-	-	Not added

NOTE:

As with all other polyurethane materials, the product's viscosity is sensitive to temperature fluctuations. Viscosity measurements were conducted at 25°C in accordance with ASTM D2196-86 standards. Viscosity increases in inverse proportion to temperature.