

# WATERPROOF 500



Two-component polyurea based waterproofing for roofs



## PROPERTIES

New generation two-component, elastomeric, polyaspartic, aliphatic based (cold polyurea) waterproofering product. Presents excellent adhesion to any sound cementitious surface. It creates a high performance, seamless membrane, without bubbles or deflections and presents long-lasting resistance to UV radiation and standing water. Distinguished for its excellent abrasion and chemical resistance, as well as for its zero-water absorption. Certified as 'Cool' material of high reflectivity and whiteness by the National Technical University of Athens, Department of Mining & Metallurgical Engineering, Laboratory of Metallurgy.

Classified as product for protection of concrete surfaces per EN 1504-2.

## APPLICATIONS

WATERPROOF 500 of DUROSTICK is suitable for waterproofing exposed concrete roofs, cement slabs, mosaics or cement screed, rooftops, parapets, existing bituminous roofing felt systems, bituminous membranes, metal roofs, but

also well adhered acrylic and polyurethane based waterprooferers.

## ADVANTAGES

- **Zero water absorption**
- Easy to apply, even in high thicknesses
- Covers micro cracks and prevents them from reappearing
- Excellent adhesion
- Stable against UV radiation for a long time (no chalking), while retaining its white color and gloss
- Once cured, within 24 hours, the product is immediately tack free and walkable
- Dries quickly, even at low temperatures
- Maintains its mechanical properties, at temperatures from -40°C to + 90°C
- Durable against corrosive gases in the atmosphere, carbon dioxide, sulfur oxides, and various chemicals
- Does not absorb mud rain and remains white
- Excellent resistance to mold and algae formation
- High solids, low odor protective coating

The technical specifications and directions of use contained in this technical brochure are the results of the knowledge and experience of the company's research and development department, as well as from the real-life applications of the product. The recommendations and suggestions regarding the use of the products are made without guarantee since the respective conditions during their application are beyond the control of the company. For this reason, it is the user's responsibility to make sure that the product is suitable for the intended application as well as the application conditions of the project.

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## Two-component polyurea based waterproofing for roofs

- Highly resistant to scratches and abrasion.
- A product with high mechanical properties, suitable for applications on surfaces subjected to high stresses and increased requirements.

### USE

#### 1. Surface preparation

To ensure the proper adhesion of the product, the surface must be sound, flat, clean and free from dust, oils, rust and any loose paint. Remove all existing paints, cement residues, moss and fungi by sanding the surface(s) and clean with a hard broom cleaner or a high-performance vacuum cleaner. Fill any gaps and repair the surface imperfections using the suitable repairing products of DUROSTICK. Before any application, the moisture content of the substrate should not exceed 4%. Repairing large cracks (>1mm) and sealing expansion joints is done by using the polyurethane sealant DUROFLEX-PU.

Waterproof the surface after 12 hours of the application. Absorbent cement surfaces are stabilized with the water-based epoxy primer, WATERPROOF EPOXY PRIMER AQUA, diluted 25% with water. Non-absorbent surfaces, such as bituminous roofing felts or metal surfaces are primed with WATERPROOF EPOXY PRIMER AQUA epoxy primer, diluted up to 10% with water.

#### 2. Application

After 24-48 hours have passed from the primer application, mix the two ingredients at the predetermined mixing ratio using a low-rpm drill, until the mixture is completely homogenous. The application is done in one or two coats, without any dilution, with a roller or brush. Apply each coat crosswise and only when the previous one is thoroughly dry and walkable (approximately 12 hours later).

### USEFUL TIPS - NOTES

- Stir well the two ingredients before use
- Waterproof the vertical surfaces (parapet) around the roof, by coating their entire surface. Seal the vertical surfaces (parapet) around the roof throughout their height.
- Avoid applying the product in thicknesses over 1mm thick per coat

- Low ambient temperatures slow down the curing process, while high temperatures speed it up.
- Avoid applying the product in high humidity conditions (> 75%), or if there is a chance of rain for the next 24 hours.
- Do not wash the substrate with water before the application
- Once the product is cured, any application residues can be removed only by mechanical means
- After curing, the product is harmless to health and the environment

### CLEANING

Clean all tools and application residues with THINNER 201 of DUROSTICK, immediately after use.

### CONSUMPTION

- 1.0kg-1.2kg/m<sup>2</sup> in two coats, depending on the substrate.
- 1.5kg-1.8kg/m<sup>2</sup> in three coats, depending on the substrate (long lasting protection).

### STORAGE

**Component A:** Store in areas protected from frost, humidity and sunlight, in closed containers, for 18 months from the production date.

**Component B:** Store in places protected from frost and humidity, in closed containers, for 9 months from the production date.

### SAFETY DIRECTIONS

**Component A:** The product is classified as irritant. It is recommended to be kept away from children. Prior to use, consult the precautionary instructions on the product packaging or the safety data sheet.

**Component B:** The product needs no hazard labeling under current European and National legislation. However, it is recommended to keep away from the reach of children. If swallowed, seek immediate medical advice and show the container or label.

### PACKAGING

- 4kg container (A+B) (2.86kg + 1.14kg)
- 20kg container(A+B) (14.3kg + 5.7kg)

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**TECHNICAL SPECIFICATIONS** (Measurement conditions 23°C and 50% R.H.)

<b>Final color of membrane</b>	White
<b>Chemical Base</b>	Two-component aliphatic polyurea
<b>Specific gravity of mixture</b>	1.45±0.05kg/lt
<b>Mixing ratio A:B</b>	2.5:1.0 by weight
<b>Working time</b>	60-90 minutes
<b>Walkability:</b>	After 6 hours
<b>Full curing time</b>	7 days
<b>Application temperature</b>	From +3°C to +35°C
<b>Temperature resistance</b>	From -40°C to +90°C
<b>Capillary water absorption w per EN 1062-3</b>	w=0.006kg/m <sup>2</sup> .h <sup>0.5</sup>
<b>Permeability s<sub>D</sub> to CO<sub>2</sub> per EN 1062-6 (method A)</b>	s <sub>D</sub> >50mm
<b>Water vapour permeability s<sub>D</sub> per EN ISO 7783-2</b>	s <sub>D</sub> = 2.49m [class I, (S <sub>D</sub> <5m)]
<b>Adhesion to concrete, per EN 1542</b>	2.5 N/mm <sup>2</sup> (requirement for flexible systems with no traffic: 0.8 N/mm <sup>2</sup> )
<b>Resistance to impact per EN ISO 6272-1</b>	20Nm (class III)
<b>Shore A hardness (ASTM D 2240)</b>	>70
<b>Shore D hardness (ASTM D 2240)</b>	>30
<b>Solar Reflectance (SR) (ASTM E 903-96)</b>	90%
<b>Thermal emittance (ASTM E 408-71)</b>	0.88
<b>Solar Reflectance Index (SRI) (A STM G 159-98)</b>	114
<b>Hydrolysis (5% KOH, 7 days)</b>	No significant elastomeric change
<b>Chemical resistance</b>	Good: Acid and alkaline solutions (5%), common detergents, oils and sea-water

**V.O.C. (Volatile Organic Compounds):**

Limit value of maximum V.O.C. content according to EC (Directive 2004/42/EC) for the particular product (category A/c: 'Coatings for exterior walls of mineral substrate', type WB): 40gr/lt (2010). Ready to use product contains maximum 35gr/lt V.O.C.

**DUROSTICK S.A.**  
ASPROPYRGOS ATHENS PC:193 00  
**GREECE**  
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DoP No.: 150  
**EN 1504-2**  
**WATERPROOF 500**  
Surface protection product  
Coating

Permeability to CO <sub>2</sub>	Sd > 50m
Water vapour permeability	Class I (permeable)
Capillary absorption:	w < 0,1 Kg/m <sup>2</sup> .h <sup>0.5</sup>
Adhesion (Pull of test):	> 2 N/mm <sup>2</sup>
Artificial weathering:	Pass
Reaction to fire:	Euroclass F
Dangerous substances comply with 5.3	

**DUROSTICK S.A.,**

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