

# WATERPROOF 500



## Two-component polyurea-based waterproofing coat for roofs



### ■ PROPERTIES

Advanced new technology two-component, elastomeric, polyaspartic, aliphatic-based (cold polyurea) waterproofing product. Presents excellent adhesion to any sound cementitious surface. It creates a high performance, seamless membrane, without bubbles or imperfections 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.

### ■ ADVANTAGES

- Zero water absorption, even on surfaces with standing water.
- Easy to apply, even in high thicknesses
- Covers micro cracks and prevents them from reappearing
- Excellent adhesion

- Durable against UV radiation for a long time (no chalking), while retaining its white color and gloss.
- It does not yellow, maintains its color unchanged, and does not need recoating (with the same or another product).
- 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 mudrain and remains white
- Excellent resistance to mold and algae formation
- High solids, low odor protective coating
- Highly resistant to scratches and abrasion.
- A product with high mechanical properties, suitable for applications on surfaces subjected to high stresses and increased requirements.

### ■ APPLICATIONS

WATERPROOF 500 of DUROSTICK is suitable for waterproofing exposed concrete roofs, cement slabs, mosaics or cement screed, rooftops, parapets,

The technical specifications and directions of use contained in this technical data sheet 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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existing asphalt roofing roll, bituminous membranes, metal roofs, but also well adhered acrylic and polyurethane based waterproofers.

### ■ 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 street broom or a high-performance vacuum cleaner. Fill any gaps and repair the surface imperfections using the suitable DUROSTICK repair products. 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 asphalt roofing rolls or metal surfaces are primed with WATERPROOF EPOXY PRIMER AQUA epoxy primer, diluted up to 10% with water. The consumption of the primer ranges from 125-150gr/m<sup>2</sup>.

#### 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 electric mixer, 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

- Mix well the two ingredients before use
- Waterproof the vertical surfaces (parapet walls) around the roof, by coating their entire surface.
- 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.

### ■ 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, moisture and sunlight, in closed containers, for 18 months from the production date.

Component B: Store in places protected from frost and moisture, 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 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.

### ■ PACKAGING

4kg container (A: 2.86kg, B: 1.14kg)  
20kg container (A: 14.3kg, B: 5.7kg)

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<b>TECHNICAL SPECIFICATIONS</b> (Measurement conditions 23°C and 50% R.H.)	
■ Final color of membrane	White
■ Chemical Base	Two-component aliphatic polyurea
■ Specific gravity of mixture	1.45±0.05kg/lt
■ Mixing ratio A:B	2.5:1.0 by weight
■ Working time	60-90 minutes
■ Foot traffic	After 6 hours
■ Full curing time	7 days
■ Application temperature	From +3°C to +35°C
■ Temperature resistance	From -40°C to +90°C
■ Capillary absorption and water permeability w per EN 1062-3	$w=0.006\text{kg/m}^2\cdot\text{h}^{0.5}$
■ Permeability SD to CO <sub>2</sub> per EN 1062-6 (method A)	SD>50mm
■ Water vapour permeability SD per EN ISO 7783-2	SD = 2.49m [class I, (SD <5m)]
■ Adhesion strength per EN 1542	2.5 N/mm <sup>2</sup> (requirement for flexible systems with no traffic: 0.8 N/mm <sup>2</sup> )
■ Impact resistance per EN ISO 6272-1	20 Nm (class III)
■ Shore A hardness (ASTM D 2240)	>70
■ Shore D hardness (ASTM D 2240)	>30
■ Solar Reflectance (SR) (ASTM E 903-96)	90%
■ Infrared emissivity (ASTM E 408-71)	0.88
■ Solar Reflectance Index (SRI) (ASTM G 159-98)	114
■ Hydrolysis (5% KOH, 7 days)	No significant change in its flexibility
■ Chemical resistance	Good: Acid and alkaline solutions (5%), common detergents, oils and seawater

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

Limit value of maximum V.O.C. content according to EU (Directive 2004/42/CE) for the particular product (category A/c: 'Coatings for exterior walls of mineral substrate', type WB): 500gr/lt (2010). The ready to use product contains maximum 250gr/lt V.O.C.

### DUROSTICK S.A.,

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