

WATERPROOF 500



Two-component polyurea based waterproofing for roofs



■ PROPERTIES

New generation 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 defections.

It has 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, well adhered acrylic and polyurethane based waterproofers.

■ USE

1. Surface preparation

To ensure the proper adhesion of the product, the surface must be stable, flat, clean and free from dust,

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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).

■ 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

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

■ USEFUL TIPS - NOTES

- Stir well the two ingredients before use.
- Waterproof 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.

■ CLEANING

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

■ CONSUMPTION

- 1.0kg-1.2kg/m² in two coats, depending on the substrate.
- 1.5kg-1.8kg/m² 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.

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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: 2,86kg, B: 1,14kg)

20kg container (A: 14,3kg, B: 5,7kg).

DUROSTICK S.A.,
MANUFACTURING OF ADHESIVES,
PAINTS & MORTARS

ATHENS: ASPROPYRGOS, ATTICA, GR: 193 00,

Tel: +30 211 60 03 500-599, +30 210 55 16 500,

+30 210 55 98 350, Fax: +30 210 55 99 612

THESSALONIKI: INDUSTRIAL PARK-SINDOS, S.B. 44,
STREET, DA 10, GR: 570 22,

Tel: +30 2310 795 797, +30 2310 797 365,

Fax: +30 2310 797 367

Email: info@durostick.com

TECHNICAL SPECIFICATIONS (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/lit
Mixing ratio A:B	2.5:1.0 by weight
Working time	60-90 minutes
Walkability	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 water absorption w per EN 1062-3	w = 0,006kg/m ² ·h ^{0.5}
Permeability s _D to CO ₂ per EN 1062-6 (method A)	s _D >50mm
Water vapour permeability s _D per EN ISO 7783-2	s _D = 2.49m [class I, (s _D <5m)]
Adhesion to concrete, per EN 1542	2,5 N/mm ² (requirement for flexible systems with no traffic: 0.8 N/mm ²)
Resistance to impact per EN ISO 6272-1	20Nm (class III)
Shore A hardness (ASTM D 2240)	>70
Shore D hardness (ASTM D 2240)	>30
Solar Reflectance (SR) (ASTM E 903-96)	90%
Thermal emittance (ASTM E 408-71)	0,88
Solar Reflectance Index (SRI) (ASTM G 159-98)	114
Hydrolysis (5% KOH, 7 days)	No significant elastomeric change
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/EC) for the particular product (category A/c: 'Coatings for exterior walls of mineral substrate', type WB): 500gr/lit (2010). The ready to use product contains maximum 250gr/lit V.O.C.

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