

# ULTRACOLL THERMO



Fiber reinforced adhesive for insulation boards on walls and roofs



## PROPERTIES

Fiber reinforced cementitious adhesive, fortified with resins that provide excellent flexibility and resistance to moisture. Presents exceptional bonding power and high adhesion on thermal insulation boards made from expanded (EPS) or extruded polystyrene (XPS), polyurethane, cork etc., on walls made of concrete, plaster, bricks or cement blocks. The adhesive meets the requirements of ETAG 004 for External Thermal Insulation Composite Systems (ETICS). It constitutes part of THERMOSEAL (ETICS) of DUROSTICK and participates both as bonding material for polystyrene boards, and as the base coat for their top surface too. THERMOSEAL (ETICS) is certified by the Notified European Organization OIB with certification numbers ETA-13/0006 and ETA-13/0007. Classified GP: CS IV/W2, per EN 998-1.

## APPLICATIONS

**A) For External Thermal Insulation Composite System for buildings** is suitable for both

bonding the insulation boards on the building facades, and as base coat, in combination with DS-4160, the reinforcing fiberglass mesh for building facades of DUROSTICK.

**B) ULTRACOLL THERMO** is recommended for **COOLROOF and COOLROOF LIGHT, the Flat Roof Thermal Insulation and Waterproofing Systems of DUROSTICK**, thereby creating a tested thermal insulating and waterproofing system with extended life.

## USE

### 1. Surface preparation

Application surface must be flat (level), clean, free from loose materials, dust, oils, paint, etc. Absorbent surfaces are soaked with water or primed with the micromolar stabilizer (primer) AQUAFIX of DUROSTICK.

### 2. Application

Empty the adhesive in approximately 7.0-7.5lt of clean, cool water and mix with a low-rpm drill. Allow for the mixture to mature for 5-10 minutes, and stir periodically without adding extra water.

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**A) For the External Thermal Insulation Composite System (ETICS) THERMOSEAL: On flat surfaces:** Apply the adhesive onto the thermal insulating board, 'comb' the adhesive evenly over the entire surface with a notched trowel and install it on the wall.

**On non-flat surfaces:** Apply the adhesive around the edges of the insulating board with a margin trowel and on spots (dots) to the rest of the surface. Place the board on the wall and apply pressure on its surface, to ensure safe and uniform contact between the adhesive and the substrate. The installation requires levelling, in order to ensure the evenness of the adhered board surface. At least 24 hours later, depending on the building size and height, apply the appropriate number of plastic fasteners (anchors).

**Apply it as reinforcing top coat for insulating boards:** Using a notched trowel, apply across the entire surface, a thin coat (3-5mm) of the adhesive, and encase in it the reinforcing fiberglass mesh of DUROSTICK DS-4160. Use the trowel to smooth the surface as soon as the mesh installation is completed. On complete cure, coat the surface with HYDROSTOP PLASTER ELASTIC, the waterproof flexible plaster, available in smooth or textured finish. Alternatively, use HYDROSTOP SILICONE PLASTER, the silicone based, waterproofing topcoat plaster in paste form, also suitable for creating a smooth or textured finish. For a detailed description of this application, review the DVD for the THERMOSEAL system of DUROSTICK or visit [www.durostick.com](http://www.durostick.com).

**B) For COOL ROOF, the thermal insulation and waterproofing system for roofs:** For flat roofs and uneven substrates, apply a coat of the adhesive on the polystyrene board or directly on the roof concrete slab and 'comb' it with a notched trowel. Install the insulation boards, covering the entire surface. Once dry, prime the surface of the insulation boards with the specialized quartz, acrylic primer DS-255 of DUROSTICK. The primer application will provide optimal bonding conditions for the cement screed that will be installed next. Cover the boards with D-6 cement screed of DUROSTICK or coat with a mix of 3 parts sand, 1 part gravel, 1 part cement and 12mm polypropylene fibers DUROFIBRE of DU-

ROSTICK (about 900gr/m<sup>3</sup>), to a thickness between 2-4cm, providing a compact and durable substrate. Ten days later, coat the cement screed with DUROSTICK HYDROSTOP ROOF or 2 COMPONENT HYDROSTOP, in three crosswise layers (1mm/coat thickness) using an emulsion brush (broad brush) or roller for rough textures. For terraces that are under particular loads and stresses or they are larger than 50m<sup>2</sup>, it is necessary to apply and encapsulate DS-490, the alkalis-resistant fiberglass mesh, of DUROSTICK (with 4x4mm mesh opening, 90gr/m<sup>2</sup>) or DUROSTICK DS-4160 (160gr/m<sup>2</sup>). During the application of the first coat of the waterproofer, encapsulate the fiberglass mesh, and **necessary follow with two more coats**. This way, proper waterproofing is ensured for many years, in addition to excellent thermal insulation. For a detailed description of this application review the DVD for the COOLROOF of DUROSTICK or visit [www.durostick.com](http://www.durostick.com).

## CLEANING

Clean tools and equipment with water, immediately after use.

## CONSUMPTION

**As adhesive:** 2.5-4kg/m<sup>2</sup>, depending on the notch size and the substrate.

**As mesh coating layer:** 1.5kg/m<sup>2</sup>/mm to coat the fiberglass mesh.

## STORAGE

Store in the factory sealed packages, in dry and shaded places for at least 12 months from production date.

## SAFETY DIRECTIONS

The product contains Portland cement. Before use, read the safety instructions on the product packaging or the Material Safety Data Sheet.

## NOTE

After hardening, the product is harmless to health and the environment.

## PACKAGING

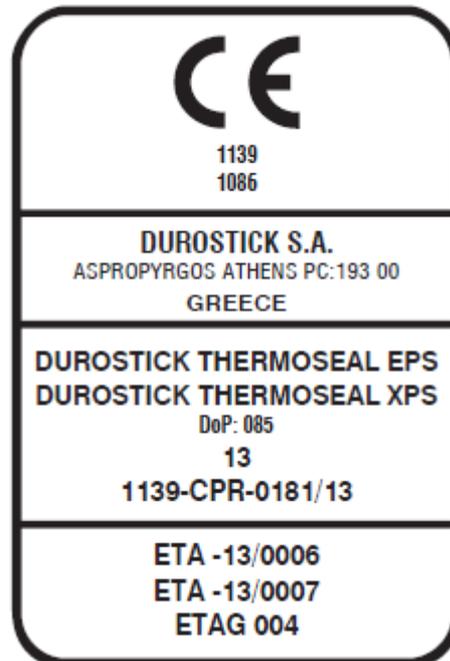
Paper bag of 25kg on 1,500kg pallet

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<b>TECHNICAL SPECIFICATIONS (Measurement conditions 20°C and 65% R.H.)</b>	
<b>Form - Color</b>	Fiber reinforced cementitious mortar - White
<b>Toxic</b>	No
<b>Bulk density of dry mortar</b>	1.40±0.05kg/lt
<b>Bulk density of fresh mortar</b>	2.00±0.05kg/lt
<b>Maximum grain size</b>	600µm
<b>Vertical slip, per EN 1308</b>	< 0.5mm
<b>Water requirement</b>	7.0lt water in 25kg mortar
<b>Application temperature</b>	From +5°C to +35°C
<b>Temperature resistance</b>	From -35°C to +80°C
<b>Pot life</b>	At least 7 hours
<b>Open time, per EN 1346</b>	30 minutes
<b>Time for minor adjustments</b>	35 minutes
<b>PRODUCT PERFORMANCES</b>	
<b>Strength after 28 days, per EN 1015-11, to:</b>	
• flexion	8.50±0.50 N/mm <sup>2</sup>
• compression	15.00±1.50 N/mm <sup>2</sup>
<b>Adhesive strength after 28 days:</b>	
• On concrete, per EN 1015-12	≥ 2.00 N/mm <sup>2</sup>
• On expanded polystyrene (EPS), per ETAG 004	> 0.14 N/mm <sup>2</sup> (exceeds the standard by 100%)
• On extruded polystyrene (XPS), per ETAG 004	> 0.27 N/mm <sup>2</sup> (exceeds the standard by 150%)
<b>Capillary water absorption (c), per EN 1015-18</b>	≤ 0.10kg/m <sup>2</sup> min0,5
<b>Water vapor diffusion coefficient per EN 1015-19</b>	µ 5/20
<b>Thermal conductivity λ10, dry per EN 1745 (Table A.12)</b>	0.40 W/m.K
<b>Reaction to fire, per EN 13501-1</b>	Euroclass A1

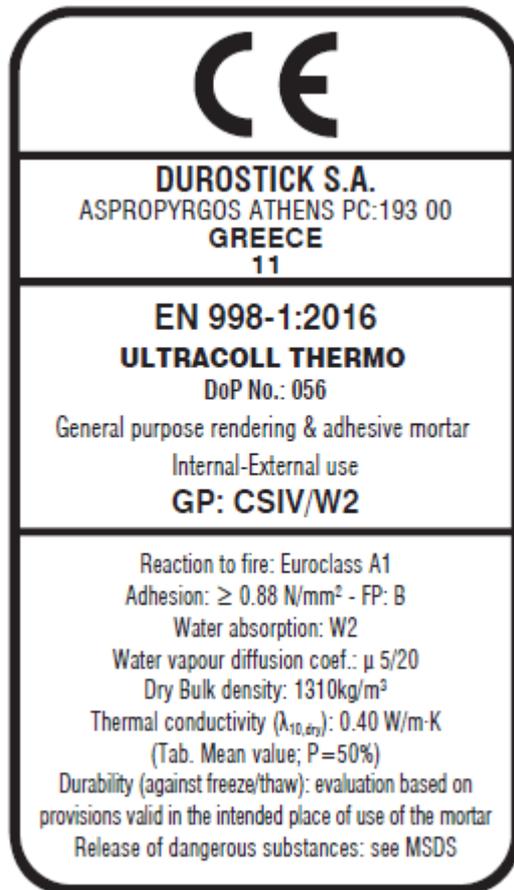


The technical specifications and directions of use contained in this technical brochure are the results of the knowledge and experience of the company's research and development department, as well as from the real-life applications of the product. The recommendations and suggestions regarding the use 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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