

# DS-220



## Elastomeric waterproofer for flat roofs (liquid rubber)



### ■ PROPERTIES

Brushable elastomeric acrylic waterproofer for roofs with long-lasting durability. It creates a white protective membrane, without seams nor joints, with excellent adhesion to various substrates. Due to its high modulus of elasticity, it can absorb intense expansions and contractions, without the necessity for additional reinforcement (mesh). It protects surfaces from moisture that can adversely affect concrete rebars.

Certified by the University of Athens (Department of Physics, Division of Applied Physics), as 'Cool' material of low thermal conductivity and high reflectivity.

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

### ■ ADVANTAGES

- It offers remarkable resistance to adverse weather conditions, maintaining

its properties in temperatures ranging from -30°C to +90°C.

- It is resistant to the corrosive gases of the atmosphere, such as carbon dioxide, sulfur oxides, chlorides, etc.
- It contains new age UV filters, contributing to its long-lasting resistance against the destructive effects of solar radiation.
- It provides walkable surfaces that do not stick, after its complete cure.
- It can effectively cover substrate cracks and it is not affected by the (possible) creation of new ones on the substrate itself.
- It presents excellent resistance, even to standing water.
- It improves the energy efficiency of the building. It reduces heat absorption from the roof, due to its reflective capacity ( $\geq 80\%$ ) and its exceptional whiteness.

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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- It reduces the indoor temperature of spaces under the roof throughout the summer and keeps it watertight in the winter. Consequently, it also contributes to the reduction of energy consumption for cooling or heating.
- It reduces the danger of moisture concentration to the substrate, and consequently the creation of mold, because it is vapour permeable.
- Ideal waterproofing solution for surfaces with installed (or to be installed in the future) photovoltaic modules.
- It maintains its whiteness without any calcification problems.
- It cleans easily by water only.

### ■ APPLICATIONS

DUROSTICK DS-220 is applied with ease on terraces and roofs to be covered with clay roof tiles, on roof corners and ridges, on lead lined roof valleys, balconies and built-in planters. It is recommended for substrates made from concrete and terrazzo, as well as for wood surfaces. It is also suitable for existing asbestos-based mortars, cement boards and well-adhered asphaltic based roofing material.

### ■ USE

#### 1. Preparation of cementitious surface without any waterproofing:

Using a stiff broom and water, thoroughly clean any loose sections, dust and mud. Remove any black spots using DUROSTICK D-95 CLEANER or a bleach - water solution, at a dilution ratio of 1:1. Continue by thoroughly rinsing with plenty of water. Surfaces to be waterproofed must be dry and should not get wet for the next 24 hours, in order to avoid surface moisture from being trapped.

#### Preparation of surfaces coated with waterproofing product(s):

- **Detached torch-down roofing material:** Remove them using a wide roofing scraper and roofing torch or other mechanical means.
- **Well adhered existing torch-down roofing materials,** only require a first coat of DS-220 diluted 5% with water and a second coat undiluted applied crosswise.

- **Detached or deteriorated elastomeric waterproofers,** must be removed using a wide roofing scraper or other mechanical means.
- **Detached elastomeric materials, that are not visible,** can be found using a garden hose. Pour water on the roof surface from about 1 meter high. Notice the change of the sound the water makes when it hits the detached parts of the waterproofing and mark them. Cut the detached sections using a razor blade, or other mechanical means and scrape the defective material off.

### 2. Application:

Using a roller, first apply the micromolar stabilizer AQUAFIX, or the SOLVENT BASED PRIMER, diluted 30% with THINNER 101 of DUROSTICK. Alternatively, if the roof does not have any deteriorated sections, dilute DS-220 with water, at a ratio of 1:1 and use it as primer. Once the priming product dries, locate any possible hairline cracks (0.1-0.4mm). Individually coat each crack with one or two layers using the undiluted product, to seal them completely. If the width of the cracks is between 0.5-1mm, it is recommended to seal them using the ACRYLIC CAULK or the elastomeric sealant, DS POLYMER of DUROSTICK, using a putty knife. Continue by applying two coats of DS-220 over the cracks to complete their sealing treatment. Complete the surface waterproofing by applying two coats over the entire area using undiluted DS-220 of DUROSTICK. Apply the second coat crosswise to cover any minor substrate imperfections, once the first one is completely dry and walkable.

### ■ HELPFUL TIPS - NOTES

- Mix well before use with a low rpm electric mixer.
- Avoid applying the product when there is possibility of rain within the next 24 hours.

### ■ CLEANING

Clean all tools with water (and soap or detergent if necessary), immediately after use.

### ■ CONSUMPTION

1.0-1.5kg/m<sup>2</sup> for two coats, depending on the substrate.

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### ■ STORAGE

Store in places protected from frost, for 24 months from production date.

### ■ SAFETY DIRECTIONS

The product does not require any hazard labeling under applicable European and national legislation. However, it is recommended to keep away from children. If swallowed, seek medical advice immediately by showing the container or label.

### ■ PACKAGING

Container 5kg (in a pallet of 100 containers)  
 Container 15kg (in a pallet of 48 containers)  
 Container 25kg (in a pallet of 24 containers).

| TECHNICAL SPECIFICATIONS                                       |  |
|--|--|
| ■ Form-Color   | Viscous paste-White  |
| ■ Density  | 1.40±0.05kg/lit  |
| ■ Elongation at break (per ASTM D 412)                         | After 8 days of curing and at 1mm thick membrane, the elongation at break was determined at 400% |
| ■ Full tightness   | 7 Atm per DIN 1048   |
| ■ Capillary water absorption                                   | 0.01kg/m <sup>2</sup> .h <sup>0.5</sup> (EN 1062-3, requirement EN 1504-2: w <0.1)               |
| ■ Permeability s <sub>D</sub> to CO <sub>2</sub> per EN 1062-6 | s <sub>D</sub> > 50m   |
| ■ Water vapour permeability s <sub>D</sub> per EN ISO 7783     | s <sub>D</sub> = 1.17m (water vapour class I, s <sub>D</sub> <5m)                                |
| ■ Adhesion to concrete per EN 1542                             | 1.2 N/mm <sup>2</sup> (requirement for flexible systems without traffic: 0.8 N/mm <sup>2</sup> ) |
| ■ Impact resistance per EN ISO 6272-1                          | 10Nm (class II)  |
| ■ Application temperature                                      | From + 8°C up to +30°C   |
| ■ Temperature resistance                                       | From -30°C to +90°C  |

### 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): 40gr/lit (2010).

The ready to use product contains maximum 17gr/lit V.O.C.

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