TECHNOPROOF THERMO

Thermal protection and waterproofing product for roofs

QUALITY CONTROLLED CE EN 1504-2

PROPERTIES

Top quality elastomeric thermal protection and roof waterproofing product (2 in 1), of advanced new technology, that is also solvent-free. Based on modified polyurethane and acrylic resins, its application creates a uniformed protective membrane without seams or joints with exceptionally powerful bonding ability and flexibility, resistance to permanent moisture, standing water, and frost.

In addition, due to the glass microspheres contained in its formula and its excellent resistance to UV radiation, its whiteness, and reflectivity, it also yields excellent thermal insulation properties to the surfaces where it is applied.

Among its most important advantages resulting from its application, is the cost reduction for heating and cooling (for both the winter and the summer) and the remarkable energy savings.

Certified as 'Cool' material of low thermal conductivity and high reflectivity by the National Technical University of Athens (Department of Mining and Metallurgical Engineering).

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

ADVANTAGES

- Covers hairline and capillary cracks and prevents their reappearance
- Does not require strengthening with reinforcing polyester fabric
- Easily applied using a paint roller, an emulsion brush or airless spray gun
- It is not affected by UV radiation (no chalking)
- Maintains its whiteness
- Does not saponify
- It is water vapour permeable
- It is walkable, without sticking (after its complete cure)
- Extremely durable against adverse weather conditions
- Unaffected by atmospheric pollutants

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•Maintains its flexibility, properties, and strength at temperatures from -30°C to +80°C, over time
•Does not take up space and does not add weight to the building
•Low cost, compared to other insulation systems
•Easy to spot-repair, if worn out from misuse or other cause
•Compatible with existing thermal insulating and waterproofing systems
•Presents 50% lower thermal conductivity than other white waterproofers
Reflective thermal protection: Thermal comfort - protection from outdoor temperatures - energy efficiency.
✓ Prevents the condensation of water vapour inside the building, while at the same time it protects the membrane formed from the application of the product from the growth of micro-organisms (black and green mold).
✓ Reduces heat absorption due to the glass microspheres it contains, which give it excellent reflective and dispersion properties that return back in the environment the solar (thermal) radiation they receive (the coated surfaces), at a rate of over 90%.
•Significantly reduces energy consumption for heating or cooling. In combination with the thermoceramic energy-efficient paint THERMOELASTIC COLOUR, it reduces the temperature in the summer months, by forming a strong, energy efficient protective coat.
•As a coating product, it is a smart and affordable solution in terms of waterproofing and thermal protection of new or existing buildings, especially those built before 1980.
• Contributes to the energy upgrade of buildings and homes.

■ APPLICATIONS

TECHNOPROOF THERMO of DUROSTICK thermally protects and at the same time waterproofs, new concrete surfaces without any waterproofing, but also surfaces already waterproofed with acrylic, hybrid, cementitious products, or even asphalt roofing rolls.
It can also be applied to already thermally insulated surfaces to maintain and protect their properties.
It can be applied to metal roofs of homes, factories and storage facilities, and other roofing materials (worn-out roof panels of any type, but also on trailer/mobile homes, RV/motor homes, etc.).
Suitable for application on containers for storage and transport of products that may be sensitive to high and/or low temperatures.

■ USE

1. Preparation of cementitious, unprotected surface, using a roofing scraper or a wide chisel, remove all deteriorated sections, if any. Continue by using a hard, street type, broom. Remove all black spots (mold/mildew) using DUROSTICK's D-95 CLEANER or a bleach/water solution, at a mixing ratio of 1:1. Scrub the surface thoroughly and rinse with plenty of clean water. All application surfaces must be dry and should not get wet for the next 48 hours, in order to avoid surface moisture from being trapped.

2. Preparation of surfaces coated with
•waterproofing product(s):
Elastomeric or cementitious waterproofer in good condition, just apply over to protect them from future damage and to achieve thermal protection in addition to waterproofing.
•**Detached torch-down roofing materials**, remove them using a wide roofing scraper and roofing torch or other mechanical means. Thoroughly clean and prime the entire surface with WATERPROOF EPOXY PRIMER AQUA. Use the same primer for non-absorbent tiles. The application of TECHNOPROOF THERMO takes place up to 12 hours after the application of the primer but not later than that.
•**Well adhered torch-down roofing materials**, only require to thoroughly remove all the dust from their surface and to seal any detached sections (if any). Prime with AQUAFIX, diluted by 20% with clean potable water, to stabilize its pebbles.
•**Detached or deteriorated elastomeric** waterproofers, have to be removed using a wide roofing scraper or a razor blade.
•**Metal roof panels**, pressure wash the roof to remove surface rust and other deposits. It is recommended to apply the corrosion inhibitor RUST FREE POWDER, on very rusty surfaces, and then to

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protect them from rust using either the NATURAL RED LED or the METAL PRIMER, as well as the polyurethane sealant DUROFLEX-PU of DUROSTICK, to seal around the installation screws (before the application of TECHNOPROOF THERMO).

3. Application:
Using a roller and a brush, first prime all cementitious surfaces using the water-soluble, micromolar stabilizer AQUAFIX or the SOLVENT-BASED PRIMER, diluted 50% with THINNER 101 of DUROSTICK. When dealing with a weathered cement surface that is dusting, prime with WATERPROOF EPOXY PRIMER AQUA of DUROSTICK, as before. Once the primer has been absorbed into the surface and is completely dry, it is possible for some hairline cracks to become visible. Treat those cracks by applying several coats of TECHNOPROOF THERMO, until they are completely sealed. Seal wider cracks (≥ 1mm) using the elastomeric sealant DS POLYMER, or by using the polyurethane elastomeric sealant DUROFLEX-PU of DUROSTICK. Once the sealant is dry, apply two coats of TECHNOPROOF THERMO to the sealed sections. The waterproofing/thermal protection is completed by applying 2-3 universal coats* (crosswise, covering any small defects of the substrate) with a difference of 6-18 hours between them, depending on the weather conditions or once the previous coat has dried and become walkable.

* Apply it without any dilution with a roller, brush, or airless spay gun.

■ USEFUL TIPS - NOTES

•Mix well before use with a low rpm electric mixer.
•Waterproof all vertical surfaces around the roof (parapet walls), at their entire height
•Avoid exceeding thicknesses of 0.5mm per coat
•Low ambient temperatures delay the final curing time while high ambient temperatures speed up the curing process
•Avoid applying the product in high humidity conditions or when there is possibility of rain within the next 24 hours
•The product is walkable after 4-5 days, while it acquires its full mechanical strength after 20-25 days (depending on weather conditions).

■ CLEANING

Clean all tools with water and soap or detergent, if needed, immediately after use.

■ CONSUMPTION

•Minimum consumption 1.0lt/m^2 in two coats, depending on the substrate and the Application method.
•1,5kg/m^2 for 3 coats, depending on the substrate and the Application method (long-lasting protection - exceeding 15 years).

■ STORAGE

Store in shaded places protected from frost, for 24 months from production date. If opened, it will keep for 18 months as long as it is sealed tightly.

■ SAFETY DIRECTIONS

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 medical advice and show the container or label.

■ PACKAGING

3lt container (on 100 pc pallet)
10lt container (on 48 pc pallet)
15lt container (on 24pc pallet)

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TECHNICAL SPECIFICATIONS	
Form - Color	Viscous paste-White
Density	1.20±0.05kg/lt
Elasticity (per ASTM D 412)	After 8 days of curing and at 1mm thick membrane, the elongation at break was determined at 400%
Full watertightness	7 Atm per DIN 1048
Capillary absorption and water permeability	0.01kg/m^2·h$^{0.5}$ (EN 1062-3, requirement EN 1504-2: w< 0.1)
Permeability S_D to CO_2 per EN 1062-6	S_D > 50m
Water vapour permeability S_D per EN ISO 7783	S_D =1.17m (water vapour permeable class I, S_D <5m)
Adhesion strength per EN 1542	1.2 N/mm² (requirement for flexible systems with no traffic: 0.8 N/mm²)
Impact resistance per EN ISO 6272-1	10Nm (**class II**)
Application temperature	From +8°C to +30°C
Temperature resistance	From -30°C to +90°C

V.O.C. (Volatile Organic Compound):
Limit value of maximum V.O.C. content per EU (Directive 2004/42/CE) for the specific product (category A/c: 'Coatings for exterior walls of mineral substrate', Type WB): 40gr/lt (2010). The ready to use product contains maximum 12gr/lt V.O.C.

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