



MAXELASTIC®

THERMOCOAT



ENVIRONMENTAL PRODUCT DECLARATION

SOLAR REFLECTANCE AND ELASTIC COATING FOR WATERPROOFING AND THERMAL INSULATION OF ROOFS

DESCRIPTION

MAXELASTIC® THERMOCOAT is a one-component, elastic waterproofing coating based on acrylic resins in aqueous dispersion, which incorporates special microspheres with extremely low thermal conductivity. It has been specially formulated for all types of roofs with great stability against environmental agents and UV radiation. It is supplied as a thixotropic paste, suitable for being applied in liquid form, which once polymerized generates a coating totally adhered to the substrate to be covered with absolute waterproofing and low thermal conductivity performance.

APPLICATIONS FIELDS

- Waterproofing with very low thermal conductivity for all types of roofs, decks, terraces, facades, partition, or vertical walls, etc.
- Thermal protection and minimizing cold-wall effect in roofs and walls
- Protection of polyurethane insulation foams from weathering and UV rays.
- Waterproofing and heat protection on tile roof, metal roof, fibre-cement board roof, asphalt membrane, etc.
- Thermal insulation on exterior faces of pillars and top floor slabs.

ADVANTAGES

- Reduces the temperature of the exposed surface under conditions of maximum solar radiation to approximately 10°C.
- Reduces the energy costs associated with cooling and air conditioning. High solar

reflectance coating, reducing the heat absorption and the energy consumption of air conditioning equipment.

- Good elasticity. It forms a continuous coating without joints. Withstands movements of substrate due to settlement and/or expansion.
- Excellent carbon dioxide diffusion barrier for concrete. High resistance to penetration of carbon dioxide, prevents the corrosion of rebars caused by carbonation process.
- Good adhesion on the most common substrates, filling and sealing all pores and fissures without primers: concrete, masonry, bricks, tiles, metal surfaces, fibre-cement elements, plasterboards, wood, etc.
- Long lasting and colour stability, high resistance to aging and UV rays
- Suitable for decorative finish with no maintenance required.
- Suitable for a wide range of temperature: from -15°C to 90°C.
- Ready to use and easy apply manually (brush, roller, etc.) or by air-less spray machine. Does not require skilled applicators. Cold applied.
- Environmentally friendly: non-toxic, water-based, non-flammable and solvent-free product.

APPLICATION INSTRUCTIONS

Surface preparation

Surface must be clean and free of dust, old coatings, efflorescence, loose particles, grease, oils, curing agents, form release agents, gypsum plasters, organic growth or any other contaminants that may affect to adhesion. Concrete substrate must be structurally sound, firm, without cement laitance and as uniform as possible, with a slight roughness preferably, i.e., open texture surface. In case of smooth and/or poorly absorbent substrates, use sand

blasting or high-pressure water cleaning methods, not being desirable aggressive mechanical means.

Voids, honeycombs, cold joints, and non-active cracks, once opened and routed to a minimum depth of 2 cm, must be repaired with **MAXREST®** (Technical Bulletin No. 2). Exposed rebars should be cleaned by scraping or wire brushing and passivated with **MAXREST® PASSIVE** (Technical Bulletin No. 12), while non-structural steel must be cut to a depth of at least 2 cm and then covered with **MAXREST®**.

Metal surface must be washed by high-pressure water, degreased and free of dust. Any trace of rust must be thoroughly prepared previously by sandblasting or shot blasting.

Application

MAXELASTIC® THERMOCOAT is supplied ready to use. Stir the packaging content manually with a clean tool or preferably by mechanical means such as a slow speed electric drill (300-400 rpm) fitted with a disc mixer, until achieving a homogeneous product in colour and appearance. Do not mix for prolonged period nor use high-speed mixer, which may introduce air bubbles. Apply **MAXELASTIC® THERMOCOAT** by soft brush or roller filling all pores and cavities, avoiding an excessive brushing. When applied by airless spray equipment, if necessary, dilute with the minimum amount of water that allows its pumping through the hose.

Waterproofing and protection of concrete, mortar, metal surfaces and other substrates in general:

Apply **MAXELASTIC® THERMOCOAT** in a continuous and uniform coat with a consumption from 0,5 to 1,0 kg/m² per coat. On concrete substrate apply two coats in perpendicular direction with a recommended total consumption from 1,0 to 2,0 kg/m². On steel substrate apply two coats in perpendicular direction with a recommended total consumption from 2,0 to 3,0 kg/m². Allow at least a drying time from 5 to 18 hours between coats, depending on environmental conditions. On very porous substrates and/or plenty of fissures, apply a primer coat of **MAXELASTIC® THERMOCOAT** diluted with 20-30 % of water, previous to the two pure coats. On facades and vertical surfaces split the same total consumption per a greater number of coats.

Corners and other outstanding points:

For cold joints, encounters, fissures, and other outstanding points, on the previously primed surface, apply a thick pure coat of **MAXELASTIC® THERMOCOAT** with a consumption of 1,0-1,5

kg/m², and then spread a 10-20 cm wide strip of **DRIZORO® MESH 58** glass fibre mesh into the fresh coating, ensuring that the mesh is completely embedded. Once it has dried (5-18 hours), apply a second coat of **MAXELASTIC® THERMOCOAT** with a similar consumption of 1,0-1,5 kg/m².

Active cracks and expansion joints:

Expansion joints and active cracks subject to movements, once opened up and clean, will be treated with a suitable elastomeric sealant from **MAXFLEX®** range. Optionally, once it has completely cured (4 days at 20°C), coat the area following the same procedure than *Corners and outstanding points*.

Terraces and roofs subject to pedestrian traffic:

Apply after 24 hours on **MAXELASTIC® THERMOCOAT** reinforced with the glass fibre mesh **DRIZORO® MESH 58**, a protective top layer of **MAXELASTIC® STONE** (Technical Bulletin No. 43) with 2,0 to 3,0 mm thickness, depending on the traffic expected.

Application conditions

Do not apply when rain, contact with water, condensation, dampness, and dew is expected within the first 24 h.

Do not apply with substrate and/or ambient temperature is at or below 5°C, or when are expected to fall below 5°C within the first 24 h. Do not apply to frozen or frost-covered surfaces.

Do not apply **MAXELASTIC® THERMOCOAT** above 90% of relative humidity. Surface and ambient temperature must be at least 3 °C higher than dew point.

Curing

Allow **MAXELASTIC® THERMOCOAT** to cure at least 7 days at 20°C and 50 % R.H. before flooding test. Lower temperatures and/or higher R.H. values increase the curing time.

Cleaning

All tools and equipment must be cleaned immediately with water after use. Once product cures, this can only be removed by mechanical means.

CONSUMPTION

Estimated consumption of **MAXELASTIC® THERMOCOAT** is from 0,5 to 1,0 kg/m² per coat, with a total consumption from 1,0 to 2,0 kg/m² on concrete surface, and from 2,0 to 3,0 kg/m² on steel surface.

These figures are for guidance and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on jobsite to ascertain the total consumption exactly.

IMPORTANT INDICATIONS

- Do not apply on substrates subject to raising damp or negative water pressure. Allow substrate to dry enough after rain, damp, dew, condensation, etc, as well as after washing surface.
- Allow new concrete and mortars to cure 28 days before application.
- Observe the recommended consumption per coat.
- Do not add solvents, thinners, additives, aggregates, or other compounds.
- Do not apply on vitrified or enamelled substrates, or with water repellent agents.
- Do not apply under flooring or below-grade applications. Not for immersion service. Do not use on flat roofs with slopes of less than 2 % or long-term ponding water, provide proper roof drains.
- For other uses not specified in this Technical Bulletin or further information, consult the Technical Department.

PACKAGING

MAXELASTIC® THERMOCOAT is supplied in 22 kg drum. It is available in white colour.

STORAGE

Twelve months in its unopened and undamaged original sealed packaging. Store in a cool, dry, and covered place, protected from moisture, freezing and direct sunlight, at temperatures from 5°C to 35°C.

SAFETY AND HEALTH

MAXELASTIC® THERMOCOAT is not a toxic product but direct contact with skin and eyes must be avoided. Use rubber gloves and safety goggles for application. In case of skin contact, wash affected area with soap and water. In case of eye contact, rinse immediately thoroughly with clean water but do not rub. If the irritation persists, seek medical assistance.

Consult the Material Safety Data Sheet for **MAXELASTIC® THERMOCOAT**.

Disposal of the product and its packaging should be conducted according to the current official regulations, and it is the responsibility of the final user of the product.

TECHNICAL DATA

Product characteristics		
CE Marking, EN 1504-2.		
Description. Acrylic coating for surface protection of concrete. Protection against ingress and moisture control. Coating (C).		
Principles / Methods. Protection against ingress with coating (Principle 1-PI/1.3), Moisture control with coating (Principle 2-MC/2.2)		
General appearance and colour	White thixotropic paste	
Density (g/cc)	1,07 ± 0,1	
Granulometry (mm)	0,1 - 0,3	
Thermal conductivity of micro spheres (W/m·K)	0,07	
Application and curing conditions		
Temperature / Relative Humidity, (°C / %)	Ambient:	Substrate:
	> 5 / < 90	> 5 / ---
Waiting time between coats at 20°C, (h)	5 - 18	
Drying time at 20°C, (h)	18 - 24	
Total curing time at 20°C for flooding test, (d)	7	
Cured product characteristics		
Solar reflectance, ASTM E-903 (%)	83,2 ± 0,1	
Determination of emittance, ASTM C-1371	0,78 ± 0,02	
SRI at different convection coefficient, ASTM E-1980		
Low (0-2 m/s)	101,5 ± 0,2	
Medium (2-6 m/s)	102,3 ± 0,2	
High (6-10 m/s)	103,0 ± 0,2	
Accelerated ageing and U.V. resistance (2000 h), ASTM G-53	No changes	
Permeability to water vapour, EN ISO 7783-1/-2.	< 5	
S _D (m), Classification	Class I	
Permeability to water and capillary absorption, EN 1062-3	< 0,1	
w (kg/m ² ·h ^{0.5}), Classification	Low Permeability. Class III (W3)	
Permeability to CO ₂ , EN 1062-6. S _D (m)	> 50	
Adhesion to concrete, ASTM D4541 (MPa)	>1,5	
Elongation at break, ASTM D-412 (%)	>250	
Consumption*		
Consumption per coat (kg/m ²)	0,5 – 1,0	
Total consumption on concrete / on metal surface (kg/m ²)	1,0 - 2,0 / 2,0 - 3,0	

* These figures are for guidance only and may vary depending on porosity, texture, substrate conditions and application method. Perform a preliminary test on jobsite to ascertain the total consumption exactly.

GUARANTEE

The information contained in this leaflet is based on our experience and technical knowledge, obtained through laboratory testing and from bibliographic material. **DRIZORO®**, **S.A.U.** reserves the right to introduce changes without prior notice. Any use of this data beyond the purposes expressly specified in the leaflet will not be the Company's responsibility unless authorised by us. We shall not accept responsibility exceeding the value of the purchased product. The data shown on consumptions, measurement and yields are for guidance only and based on our experience. These data are subject to variation due to the specific atmospheric and jobsite conditions so reasonable variations from the data may be experienced. In order to know the real data, a test on the jobsite must be done, and it will be conducted under the client responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any other doubt, consult our Technical Department. This version of bulletin replaces the previous one.