

THERMOELASTIC COLOUR



Thermo ceramic energy efficient paint



■ PROPERTIES

High quality thermal insulating, elastomeric, and acrylic paint. With excellent resistance to adverse weather conditions that can be defined by extreme temperature variations, high humidity, frost, and intense sunshine. It maintains its flexibility over a wide temperature range between -20°C and +80°C. The thermoceramic flexible membrane formed by its application bridges exceptionally well all capillary cracks and provides excellent waterproofing. The cutting edge technology incorporated within THERMOELASTIC COLOUR composition is mainly based on the ceramic and glass microspheres contained in its formula; these microspheres provide the product with excellent reflective properties and help to scatter solar radiation (heat) to the environment. In addition, it prevents the condensation of water vapor in the interior of the building while protecting the paint film from mold and green spots.

Consequently, due to the significant reduction of the wall moisture content where it is applied, its high reflectivity, and its thermal insulating properties, it contributes to energy savings, all year round. Extremely resistant to environmental conditions, such as air pollution, alkaline atmosphere, the concentration of urban and industrial gaseous pollutants, etc.

The efficiency of THERMOELASTIC COLOUR as coating paint deservedly brings the benefits of a smart and affordable solution regarding energy upgrade of existing buildings constructed prior to 1980. Distinguished for its enduring whiteness and high coverage. It functions as an effective carbonization blocker. It does not saponify. The final white or colored surface remains unchanged over time. Certified cool (*) paint by University of Athens (Department of Physics, Application Physics Division) as Energy efficient thermo ceramic paint for exterior wall surfaces.

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(*) Cool material

The product presents increased reflectivity to solar radiation and a high emission factor to infrared radiation. Such a product helps to reduce surface temperatures and - consequently - indoor temperatures as well as energy consumption of the building. It also helps to eliminate the so called 'heat island effect' and to improve summer climate in urban environments. The parameters whose values are used to classify a product as cool, are solar reflectivity (SR), emission coefficient (e), composite solar reflectivity index (SRI) and thermal conductivity coefficient (λ). The values of the above mentioned parameters that classify DUROSTICK THERMOELASTIC COLOUR as 'cool material', are listed below:

SR****	e	SRI	λ
0,98**	0,82***	115****	0,26 \pm 5% W/m.k*
(*) per ASTM C518 - ISO 8301 (**) per ASTM E903 - 96 & ASTM G159-98 (***) per ASTM E408 - 71 (2002) (****) per ASTM E1980 - 01 (*****) Reflectivity (against visible solar radiation) in the visible spectrum (400-700nm) Total reflectivity: 0.91			
Measurements refer to the white color			
For the above parameters that classify a paint as 'Cool' to be in effect, and the maximization of the energy-efficient benefits, mainly through the maintenance of its reflectivity, the choice - application of white or light color paints is recommended.			

■ APPLICATIONS

THERMOELASTIC COLOUR can be used to thermally insulate, seal and decorate new or already painted exterior vertical building surfaces made of plaster, concrete, cement boards, prefabricated structural materials etc.

Mix well before any use.

■ USE

1. Substrate preparation

Concrete and marble based plaster surfaces have to be dry, free from loose materials and oils, and must have cured for at least 30 days after their construction.

For new concrete surfaces, make sure to remove any formwork oils using the biodegradable oil cleaner BIOCLEAR INDUSTRIAL. Subsequently, apply 2 coats of 1mm using the corrosion inhibitor RUST FREE POWER of DUROSTICK, on any exposed rebars. Once dry, cover the rebars with repair mortar DUROFIX or the thixotropic rapid set repair mortar DS-245 POWER MORTAR RAPID of DUROSTICK. Finally, prime with SOLVENT BASED PRIMER of DUROSTICK, diluted with THINNER 101 or white spirit.

For new marble based plaster surfaces, sand them down using #60 sandpaper and prime using 100% ACRYLIC PRIMER, AQUAFIX, micromolar stabilizer or SOLVENT BASED PRIMER of DUROSTICK.

Surfaces infested with black or green mold or even active fungi, necessarily have to be cleaned using DUROSTICK D-95 CLEANER, rinse thoroughly, dry and prime using SOLVENT BASED PRIMER or the micromolar stabilizer AQUAFIX of DUROSTICK.

For skimming or spackling, use STUCOFIX paste, STUCOFIX-P, POWDER COAT, GRANULAR ULTRA or GRANULAR of DUROSTICK, or any combination of the above, depending on the surface imperfections and smoothness of the finish we wish. Follow by priming the surfaces.

Already painted, sound surfaces require just two coats with the DUROSTICK paint of your choice.

Surfaces soiled with soot and air pollution, are cleaned with the biodegradable cleaner BIOCLEAR (for nicotine and soot) or they are primed with METAL PRIMER of DUROSTICK.

For peeling surfaces, remove all loose materials and prime using 100% ACRYLIC PRIMER, or the micromolar stabilizer AQUAFIX of DUROSTICK.

Marble based plaster surfaces with severe cracks, are sealed with fast setting repair plaster D-32. Surfaces of concrete are sealed with repair mortar

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D-55 of DUROSTICK and primed afterwards as described before. Especially on surfaces with intense expansions and contractions, the application of the water repelling, flexible plaster, HYDROSTOP PLASTER ELASTIC or the innovative and flexible, multipurpose, repairing cementitious mortar, MEGAFIX of DUROSTICK, is highly recommended.

Filling joints around door and window casings, by using the paintable ACRYLIC CAULK for interior use, the elastomeric sealant DUROFLEX-PU of DUROSTICK for exterior use, or the versatile sealant and adhesive for interior/exterior use, DS POLYMER, available in 32 colors.

2. Application

Dilute THERMOELASTIC COLOUR with clean, cool water at a ratio of 5-10%, depending on the substrate, and stir well. Apply with brush, roller or airless spray gun in 2 coats. Apply the second coat, after the first one is completely dry.

■ CLEANING

Clean all tools with water and detergent solution, immediately after use

■ LIMITATION OF USE

Do not apply with temperatures below +8°C or if there is a chance of rain or frost within the next 12 hours.

■ PERFORMANCE

Approximately 10-12m²/lt per coat, depending on the texture, the absorbency of the surface and the application method.

■ STORAGE

Store in the factory sealed containers indoors, in temperatures between +5°C and +35°C, for up to 18 months from production date.

■ SAFETY DIRECTIONS

The product needs no hazard labeling under current European and National legislation. However, it is recommended to keep the product away from the

reach of children. If swallowed, seek immediate medical advice and show the container or label.

■ PACKAGING

3lt container (on a 120 pcs pallet)

10lt container (on a 48 pcs pallet)

TECHNICAL SPECIFICATIONS

■ Color	White that does not yellow over time
■ Shades	20 basic DUROCOLOR liquid pigments in 20ml syringe packaging, that create 120 permanent colors. The PAL paint base is colored via the COLOR COLLECTION System in any desired color.
■ Washability	> 22.000 cycles (per DIN 53788)
■ Gloss	Matte
■ Drying time-Recoating time	2-3 hours (touch dry). Recoat after 6-8 hours. Drying and recoating times depend on ambient conditions (humidity-temperature).
■ Application temperature	From +8°C to +35°C

V.O.C. (Volatile Organic Compounds):

Limit value of maximum V.O.C. content per EU (Directive 2004/42/EC) for the particular product (Class A/c: 'Coatings for exterior walls of mineral substrate' Type WB): 40gr/lt (2010). The ready to use product contains maximum 39gr/lt V.O.C.

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