

6.4 Acrylic paints for plaster & concrete

THERMOELASTIC COLOUR Thermo ceramic energy efficient paint



Durocolor
MEASURING SYSTEM FOR SHADE RENDERING

COLOR
COLLECTION SYSTEM

ΤΕΧΝΙΚΑ ΧΑΡΑΚΤΗΡΙΣΤΙΚΑ

Available color	White that does not yellow over time
Colors	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
Flammable	No

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

Limit value of maximum V.O.C. content per EC (Directive 2004/42/EC) for the particular product (Class A1c: 'Coatings for exterior walls of mineral substrate' Type WB): 40gr/lit (2010). Ready to use product contains maximum 39gr/lit V.O.C.

CONSUMPTION

1lt/10-12m² per coat, on properly prepared surfaces.

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 (3.9kg) containers (on a 120pc pallet)
10lt (13kg) containers (on a 48pc pallet)

PROPERTIES

Thermal insulating, elastomeric and acrylic cool(*) paint (low thermal conductivity), with high reflectivity, certified by University of Athens (Department of Physics, Application Physics Division) as Energy efficient thermo ceramic paint for exterior wall surfaces. It offers all the benefits of a superior quality acrylic paint, with excellent tolerances to adverse weather conditions.

Those conditions may include extreme temperature variations, and high humidity, frost, as well as strong sunlight. It is also extremely tolerant to alkaline environment, high concentrations of urban and industrial polluting gases etc.

It provides high water vapour permeability. It prevents water vapour condensations inside buildings, thus not favouring the development of mildew. It creates a thermoceramic elastic membrane that efficiently closes capillary cracks, and ensures waterproofing.

It functions as an effective carbonization blocker. It does not saponify. It maintains its flexibility over a wide temperature range between -20°C and +80°C, and also exhibits excellent resistance to excessive temperature variations.

It stands out for its enduring whiteness and high coverage. It creates a protective shield over any outdoor plaster and concrete surface. Significantly reduces temperatures inside the building during the summer months and helps to fight chill during the winter.

The efficiency of THERMOELASTIC COLOUR as coating paint deservedly brings the benefits of a smart and affordable solution regarding energy upgrade of old buildings.

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 characteristics and help to scatter solar radiation (heat) to the environment. THERMOELASTIC COLOUR acts as a dehumidifier, considerably contributing to the reduction of moisture of the wall surfaces that is applied on.

Therefore, it contributes to energy saving, since 4% moisture content in the masonry surfaces reduces their heat insulation capacity by 50%. The final white or colored surface of THERMOELASTIC COLOUR remains

unchanged over time, while offering unsurpassed protection of the application surfaces as well.

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 it in combination with the water-proofer DS-220 of DUROSTICK to reduce the energy consumption for cooling and heating up to 30% and the indoor temperature during the summer months by 20%.

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.

USE

1. Substrate preparation

Surfaces have to be clean, dry and free from dirt, salt, oils and all loose materials.

For new concrete surfaces, make sure to remove any formwork oils using BIOCLEAR INDUSTRIAL, the biodegradable oil cleaner.

Continuing, apply two, 1mm thick coat each one, of the corrosion inhibitor RUST FREE POWER of DUROSTICK, on any exposed rebars. Once dry, cover the rebars with repair mortar DUROFIX of DUROSTICK or use the thixotropic and rapid set repair mortar DS-245 POWER MORTAR RAPID of DUROSTICK.

Following, prime the surface using the SOLVENT BASED PRIMER or the micromolar stabilizer AQUAFIX.

New marble based plaster surfaces, are first sanded and then primed, same as 'for new concrete surfaces'.

Marble based plaster surfaces with severe cracks, are sealed with fast setting repair plaster D-32, then primed and painted.

Severe cracks on concrete, are sealed with the repair mortar D-55 of DUROSTICK.

Microfractures over the entire surface are repaired by plastering the surface with the innovative flexible topcoat plaster, HYDROSTOP PLASTER ELASTIC or the flexible mortar for repair and waterproofing of wall surfaces, MEGAFIX.

They will both cover all the imperfections and prevent their recurrence.

Fill the joints around door and win-

dow casings, by using elastomeric sealant DUROFLEX-PU of DUROSTICK, or DS-POLY-MER available in 32 colors.

Spackle holes, microcracks, blisters etc. using the acrylic putty STUCOFIX.

Skimming or repairs of surfaces are performed either to repair construction defects and concrete pouring flaws or for aesthetic reasons and design alterations.

2. Application

Dilute THERMOELASTIC COLOUR with clean, cool water at a ratio of 5-10%, depending on the substrate, and mix well.

Overmixing could damage the product. Apply with brush, roller or airless spray gun in 2 coats.

Apply the second coat, after the first one is completely dry.

(*) In order to comply with the parameters that characterize a paint as "cool" material and to maximize its energy efficient benefits, by mainly maintaining its reflectivity, it is recommended to choose/apply a white or light color paint.

CLEANING

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

(*) 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±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 tint

