

DUROSTICK DS-250



Microcement for walls and floors



EPD®

■ PROPERTIES

Reinforced, white or colored cement mortar. Its composition contains high-strength cement, properly graded aggregates, special active additives and resins that give the material unbreakable adhesion to the substrate, excellent workability and a perfect top surface with high mechanical resistance. The timelessness of the architectural requirements for simplicity, functionality, versatility, have brought the microcement once again, to the forefront of new construction as well as restoration projects. The product offers a new perspective, far from the ordinary and mundane wall and floor linings. Add DUROCOLOR POWDER-C, the water-soluble pigments in powder form. They will color the product throughout its mass (*), creating 96 permanent colors. Alternatively, broadcast and 'work' the pigments onto the surface. Create unique,

personalized styles on the surface by using the cementitious GROUTS of DUROSTICK, available in 38 colors or the color syringes of DUROCOLOR coloring system of DUROSTICK, to create your own personalized, one-of-a-kind style on the surface of the microcement.

Classified PCC R2, per EN 1504-3.

The product has received an Environmental Product Declaration (EPD) following an assessment of the environmental impact of its life cycle.

Registration number: S-P-13767,

The International EPD® System.

■ APPLICATIONS

DS-250 microcement is recommended for application on horizontal and vertical interior or exterior surfaces made of concrete, plaster, gypsum board, and cement board and a wide range of other

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substrates, once they have been properly prepared. The product is also recommended as a suitable substrate before applying DS-256 FLEX VELVET and DS-258 DECO MICRO FLEX. Its special formula allows for the creation of tables, built-in beds, and sinks, showers, planters as well as steps, yards, and many other applications on traditional or modern buildings aiming to create a unique character.

For thin coat applications up to 4mm, for example on floors that are subjected to particular stresses (heavy loads), is highly recommended the addition of the reinforcing polymer resin in powder form, RESIN POWDER of DUROSTICK. Add 500gr of RESIN POWDER for every 25kg (1 bag) of microcement DS-250 to drastically increase the mechanical strength of the product and particularly its top surface.

Similarly, the use of RESIN POWDER is recommended for restoration projects that microcement will be applied over existing tiles or mosaic. However, it is also necessary to first prime all existing surfaces with the quartz primer DS-255 or DS-290 of DUROSTICK.

■ USE

1. Surface preparation

The substrate must be sound and well soaked, free from dust, oils, and all loose materials. It is necessary to create expansion joints on all exterior floor applications, every 25-30m² and every 40m² for interior ones. It is also necessary to create perimeter expansion joints, 8-10mm wide on all floor applications.

2. Application

Cover all surrounding surfaces to protect them from unnecessary stains. Mix 25kg of microcement (1 bag) into 5.0lt of clean, cool water and stir by using a cement mixer or a low-rpm drill, until a lump-free, cohesive, homogeneous paste is created. Allow for the mixture to mature for 5-10 minutes and stir periodically. Soak with clean water the substrate that will be immediately coated with the product. 'Comb' the product on the surface using a wide, stainless notched trowel to a thickness of 5-10mm per coat. On floor applications and especially those on commercial floor spaces subjected to heavy foot

traffic or surfaces subjected to vibrations (lofts etc.), encase the fiberglass mesh, DS-4160 of DUROSTICK (mesh opening 4x4mm and weight 160gr/m²) onto the 'combed' surface with the wide side of the notched trowel. Press the material to eliminate any trapped air bubbles so they do not create holes on the surface. Approximately 1-1.5 hour later, and once the product sets, lay polystyrene boards on its surface to protect it from the shoes and the knees of the craftsman. Using a spray bottle wet the surface lightly and smooth it out, using a foam float. Use a gauging trowel to 'press' the microcement and to create the characteristic 'pressed' effect look. Use a wide, straight-edge trowel to smooth and perfect the entire surface. After 3-4 days (depending on the ambient conditions) and once the product has cured and thoroughly dried, it is time to enhance its surface protection. For interior vertical surfaces use the matte finish varnish DECOFIN AQUA of DUROSTICK. For interior and exterior surfaces, the use of the acrylic, solvent-based varnish VISTA is recommended. On floor surfaces and areas with increased mechanical stresses, the use of the two-component, polyurethane based varnish DECOFIN POLYURETHANE or the two-component water soluble polyurethane-based matte varnish, DECOFIN AQUA PU, (since it is odorless, it is ideal for interior spaces that are not adequately ventilated), are both highly recommended.

For interior surfaces with increased hygiene requirements, the use of the two-component, epoxy-based and gloss finish varnish DECOFIN EPOXY SF is highly recommended as well. To maintain and protect the selected color and not alter/darken it from the varnish application, it is recommended to apply the micromolar primer AQUAFIX of DUROSTICK, before applying the protection varnish.

■ NOTES

- To be 'closer' in terms of the aesthetic result and the degree of influence of its shade by the application of its protection varnish, you can consult the MICROCEMENT FAN DECK that is located in stores that sell the specific products.

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- Curing times refer to ambient conditions with a temperature of 23°C and 50% relative humidity. Those times also depend on the nature of the substrate and the thickness of the microcement coat.
- Applications where the levels of humidity are elevated and the temperature remains low, the varnish application should be done after 7 days.
- Quantities over 250kg that can line approximately 35m² can be delivered factory colored in any available shade from the DUROCOLOR POWDER-C 96 shade chart (upon request, at a pre-agreed cost).

■ USEFUL TIPS

- Should not be applied when ambient temperatures are lower than 5°C and higher than 35°C.
- During the summer months, the top surface has to be protected from intense sunlight. For the next 24 hours after the application of the product, soak the top surface once or twice, as needed to avoid premature dehydration.
- Clean the microcement surface with mild household cleaning detergents. Cleaning can be significantly facilitated when the surface is protected with one of the special varnishes of DUROSTICK.

■ CLEANING

Clean all tools with water, immediately after use.

■ CONSUMPTION

7kg/m² per 5mm thick coat.

■ STORAGE

Store in the factory sealed packages, in dry and shaded places for 12 months from production date.

■ SAFETY DIRECTIONS

The product contains Portland cement.
Before use, refer to the cautions on the product packaging or the Safety Data Sheet.

■ PACKAGING

Paper bag of 25kg on 1,500kg pallet.

Color chart of 12 colours

WHITE	ICE	LIGHT GRAY
DARK GRAY	CARBON	CHESTNUT
OAK TREE	MOCHA	ALABASTER
PISTACHIO	SUN RAY	AQUA MARINE

(*) Coloring the microcement throughout its mass using DUROCOLOR POWDER-C:

- Select one of the 96 color chart colors. Empty the required amount of pigments into a clean container with 5.0lt of clean, potable water. Mix well using a low-rpm drill. Add the white microcement and continue to mix until a fully homogenized colored mixture is created.
- Quantities over 250kg, approximately line 35m², can be de-livered -factory colored in any avail-able color from the 96 color DUROCOLOR POWDER-C color chart (special order, at a pre-agreed cost).

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TECHNICAL SPECIFICATIONS (Measurement conditions 20°C and 50% R.H.)	
■ Form - Color	Cementitious mortar - White
■ Shades	11 permanent colors and 96 selected colors, based on the DUROCOLOR POWDER-C color chart
■ Bulk density of dry mortar	1.45±0.05kg/lt
■ Bulk density of fresh mortar	1.90±0.05kg/lt
■ Maximum grain size	1.30mm
■ Water requirement	5.0lt in 25kg mortar
■ Application temperature	From +5°C to +35°C
■ Temperature resistance	From -20°C to +70°C
■ Pot life	2 hours
■ Maximum application thickness	5-10mm/coat for floors, 2-3mm/coat for walls
■ Application of protective coating or waterproofing	After 3-4 days
■ Foot traffic	After 8 hours
■ Power sanding	After 24 hours (if necessary or desired)
■ Resistance to:	
• Ageing	Excellent,
• Acids	Excellent (if pH > 3)
• Alkalis	Excellent
■ Chlorides content, per EN 1015-17	< 0.05%

PRODUCT PERFORMANCES	
■ Strength after 28 days, per EN 12190, to:	
• Flexion	≥ 6.00 N/mm ²
• Compression	≥ 21.00 N/mm ²
■ Adhesion to concrete, per EN 1542	≥ 1.40 N/mm ²
■ Thermal compatibility expressed as adhesion to concrete, per EN 13687, after:	
50 freeze-thaw cycles, 30 Storm cycles, 30 Dry heat cycles	≥ 1.20 N/mm ²
• Capillary water absorption, per EN 13057	w ≤ 0.28kg.m ⁻² .h ^{-0.5}
■ Reaction to fire, per EN 13501-1	Class A1

Where 1N/mm²=1Mpa

DUROSTICK S.A.,
 MANUFACTURING OF ADHESIVES,
 PAINTS & MORTARS
ATHENS: ASPROPYRGOS, ATTICA, GR: 193 00,
 Tel: +30 211 60 03 500-599, +30 210 55 16 500,
 +30 210 55 98 350, Fax: +30 210 55 99 612
THESSALONIKI: INDUSTRIAL PARK-SINDOS, S.B. 44,
 STREET, DA 10, GR: 570 22,
 Tel: +30 2310 795 797, +30 2310 797 365,
 Fax: +30 2310 797 367
 Email: info@durostick.com

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.