DUROSTICK DS-254 IRON

Emery fortified microcement

PROPERTIES

Ready-mixed cement mortar that resembles granite available in white, with the ability of coloration in a variety of colors, ideal for heavy-duty floor applications, in interior and exterior spaces. Its fiber-reinforced composition contains high strength cement, properly graded silica sand aggregates, as well as specialized active additives, and resins of the highest quality. All those elements yield unbreakable bonding to the substrate, impressive workability, and an exceptionally tough top surface (Mohs scale 7) with high mechanical strength. It successfully reacts to expansions and contractions of the substrate without cracking, remains unaffected by micro-vibrations and withstands rapid temperature variations and adverse environmental conditions. Industrially perfected, is the evolution of microcement that does not require any improving additives. Ideal for residential and commercial spaces Ideal for residential and business premises with high requirements to abrasion, impact and scratching. It is colored in its mass (*) by the addition of water-soluble pigments in the form of powder DUROCOLOR POWDER-C 96 shades or by broadcasting pigments on its 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. Classified PCC R3, per EN 1504-3 and as floor screed material, is classified CT-C40-F15-AR2, per EN 13813.

APPLICATIONS

DS-254 IRON applies on concrete floors, and sidewalk slabs, as well as existing tiles, marble and mosaic. Ideal for floor applications related to excessive stresses, such as patios, walkways, and garages. It is also ideal for high-traffic areas and spaces such as shopping centers, and warehouses etc. Distinguished for its powerful, permanent adhesion (2.0N/mm²) on a number of substrates, just soak the substrate with water. It is recommended to coat all nonabsorbent surfaces such as existing tiles, marble, mosaic with

DUROSTICK DS-254 IRON

Emery fortified microcement

the quartz bonding primer DS-255 or DS-290 of DUROSTICK to increase adhesion.

USE

1. *Surface preparation*

The substrate must be sound, free from dust, oils, all loose materials and it should be well soaked evenly before the application. It is imperative to create expansion joints on all exterior floor application, every 25-30m² and every 50m² for interior ones. It is also necessary to create perimeter joints; 8-10mm wide all around the flooring surface for both interior and exterior applications.

2. Application

Empty 25kg of DS-254 IRON in to 4.5- 5.0lt clean, cool water. Using a low-rpm drill or a clean cement mixer mix until a lump free cohesive and homogeneous paste is created. Allow for the mixture to mature for 5-10 minutes and mix periodically. Soak with clean, cool water as much surface (concrete or sidewalk slabs) as it can be coated within the next few minutes with the microcement. Use a gauging trowel to apply the mortar onto the surface. Use a notched trowel with a 10mm notch and ‘comb’ the product to the surface. 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 the surface to protect it from the shoes and the knees of the craftsman. Lightly spray the surface with water and use a plastering float to smooth it out in its entirety. Use the gauging trowel to ‘press’ the mortar and create the unique character, look and feel of microcement. Use the wide trowel to smooth, finish and perfect the surface. After 4-6 days (depending on the ambient conditions) and since 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 (bathrooms, sinks, kitchen counters), the use of either the two-component, epoxy-based and gloss finish varnish DECOFIN EPOXY SF or the two-component, epoxy based and satin finish DECOFIN EPOXY AQUA are both 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. • If the application surfaces are not flat and need to be smoothed out, it is recommended to apply the self-leveling, fast-setting screed for levelling floors 3-30mm, D64 of DUROSTICK. • 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).

(*) 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

DUROSTICK DS-254 IRON

Emery fortified microcement

and continue to mix until a fully homogenized colored mixture is created.

USEFUL TIPS
• Avoid product application when ambient temperatures are lower than 5°C and higher than 35°C.
• During summer months, the finish surface has to be protected from intense sunlight for the next 24 hours after the application of the product to avoid premature dehydration.

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 at least 12 months from production date.

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

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

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
Toxic	No
Bulk density of dry mortar	1.35±0.05kg/lt
Bulk density of fresh mortar	1.80±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 –35°C to +90°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 4-8 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 & EN 13892-2, to:	
• flexion	≥ 7.00 N/mm²
• compression	≥ 30.00 N/mm²
Adhesion to concrete, per EN 1542	≥ 1.90 N/mm²
Modulus of elasticity, per EN 13412	≥ 15,0 GPa
Thermal compatibility expressed as adhesion to concrete, per EN 13687, after:	
• 50 freeze-thaw cycles • 30 Storm cycles • 30 Dry heat cycles	≥ 1.90 N/mm²
Capillary water absorption w, per EN 13057:	w ≤ 0,15kg.m-2.h-0,5
Abrasion resistance BCA, per EN 13892-4	190±20μm
Reaction to fire, per EN 13501-1	Euroclass F

DUROSTICK DS-254 IRON

Emery fortified microcement

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
E-mail: info@durostick.com

DUROSTICK DS-254 IRON

Emery fortified microcement