Technical Datasheet

DUROCRET-DECO EPOXY

Three-component, decorative, cement-epoxy screed for floors and walls

Description

DUROCRET-DECO EPOXY is a three-component, cement-epoxy product, suitable for both indoor and outdoor applications on floors and walls. Advantages:

- Excellent abrasion and mechanical strength.
- Resistance to household chemicals.
- Very strong adhesion to the substrate.
- Very good workability.
- Smooth final surface.
- Exceptional aesthetic result.
- No need for reinforcement with enhancing resins.
- It can be colored with ISOMAT DECO COLOR pigments.

Certified according to EN 13813 and classified as a CT-C50-F10-AR0.5 floor coating material. CE marked.

Fields of application

DUROCRET-DECO EPOXY is used in plenty of indoor and outdoor applications, such as stairwells, floors, walls, swimming pools, in residential and public applications. Suitable for high traffic surfaces in shops, exhibition centers, shopping malls, restaurants, hotels, etc., as well as special structures, such as built-in furniture, built-in sanitary ware (washbasins, showers, etc.). Selected for its highly aesthetic design in various applications (e.g. Cycladic architecture).

Technical data

Chemical base (A+B):	2-component epoxy resin
Chemical base (C):	cementitious powder
Color (A+B+C):	white, grey
Density of comp. A:	1.11 ± 0.02 kg/l
Density of comp. B:	1.00 ± 0.02 kg/l
Bulk density of comp. C:	1.02 ± 0.05 kg/l
Bulk density (A+B+C):	1.9 ± 0.1 kg/l
Mixing ratio (A:B:C):	1: 4.24: 13.81 w/w
Pot life:	about 90 min at +20ºC
Minimum hardening temperature:	+8ºC
Recoat time:	after 24 h at +23ºC
Final strength:	after 28 days at +23ºC
Compressive strength: (EN 13892-2)	≥ 50 N/mm^2
Flexural strength: (EN 13892-2)	≥ 10 N/mm^2
Abrasion resistance: (EN 13892-4, BCA)	≤ 50 μm, AR 0.5
Adhesion strength:	> 3 N/mm^2 (concrete breaking)
Capillary water absorption: (EN 13057)	≤ 0.20 kg·m^{-2}·h$^{-0.5}$
Maximum application thickness	1 mm/layer
Reaction to fire:	Euroclass F

Directions for use

1. Substrate preparation

The substrate must be free from dust, grease, loose material, etc. Any defects in the substrate, such as cracks, cavities, etc., must be repaired with suitable materials.

Absorbent surfaces, such as concrete, concrete mortar, plaster, gypsum board, are previously primed with FLEX-PRIMER. Non-absorbent surfaces, such as old tile layers or terrazzo, are previously primed with ISOMAT SUPERGRUND. Alternatively, the two-component, water-based epoxy primer EPOXYPRIMER-500 may be used.

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2. Mixing of DUROCRET-DECO EPOXY
Components A, B and C are packaged having a predetermined mixing ratio.
Vigorously shake component A in its container and then pour it onto the original 32 l container. Then, add all of component B to component A. Mix the two components for about 30" using a low speed mixer (300 rpm). Make sure to properly reach the walls and bottom of the container while stirring, in order to obtain a homogeneous mixture.
Finally, add component C and keep stirring with a low speed mixer for approximately 3 minutes. Do not add water.

3. Application of DUROCRET-DECO EPOXY
Apply DUROCRET-DECO FLEX on the prepared substrate using a notched trowel. Place the 160 g/m^2 ISOMAT reinforcing fiberglass mesh on the “combed” surface of DUROCRET-DECO FLEX and then embed it with the smooth side of the trowel to form a relatively even surface.
After 24 hours, prime the hardened surface of DUROCRET-DECO FLEX with FLEX-PRIMER and then apply one thin layer (up to 1mm) of DUROCRET-DECO EPOXY. A second or more layers may be applied, if necessary, in order to achieve the desired aesthetic finish. Two-three days after the application and provided that the surface has dried, apply the protective varnish.

4. Application of varnish
The microcement coating can be protected with the polyurethane, solvent-based varnish VARNISH-PU 2K (gloss or satin), or the polyurethane, water-based varnish VARNISH-PU 2KW (satin-matt). The water-based varnish is ideal for interior, poorly ventilated spaces, as it is practically odorless.
VARNISH-PU 2K and VARNISH-PU 2KW are applied with a roller in two layers. The second layer is applied 4-24 hours after the first one, provided it has sufficiently dried. Consumption: 70-120 g/m^2 per layer.
For better spreading, soak the roller in the varnish, drain it in the paint tray and apply it on the surface.
VARNISH-PU 2K (gloss or satin) generally darkens the surface. If this is not desired, it is recommended to apply two varnishes in the following way:
First, apply the acrylic, water-based varnish VS-W diluted with water at a mixing ratio of 1:1, in one layer, with a consumption of 150-200 ml/m^2.
After 24 hours, apply the polyurethane two-component varnish VARNISH PU-2K (gloss or satin) in two layers. The second layer is applied 4-24 hours after the first one, provided it has sufficiently dried.
The use of VS-W prevents the intense darkening of the surface of the microcement, which can be caused by VARNISH-PU 2K. Also, the use of VS-W can significantly improve the final surface appearance of the microcement when used diluted with water at a ratio of 1:1, in one layer, prior to the application of VARNISH PU-2KW water-based varnish.

Consumption

Approx. 1.2 kg/m^2/layer.

Packaging

DUROCRET-DECO EPOXY is available in 20 kg containers (A+B+C) at the following mixing ratios:
Component A: 1.05 kg.
Component B: 4.45 kg.
Component C: 14.5 kg.

Shelf life – Storage

12 months from production date in closed containers and bags, stored in a cool and dry place, protected from moisture and direct sunlight. Recommended storage temperature: +5°C to +35°C.

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Remarks

- Temperature during application: +5ºC to +30ºC.
- Due to cement content, the product reacts with water, forming an alkaline solution. Classified as irritant.
- The processing time of epoxy systems is reduced as temperature increases.
- Please consult the safety instructions written on the packaging before use.

Volatile Organic Compounds (VOCs)

According to Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory l, type WB is 200 g/l (2010) for the ready-to-use product.
The ready-to-use product DUROCRET-DECO EPOXY contains a maximum of 200 g/l VOC.

CE

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EN 13813

EN 13813 CT-C50-F10-AR0,5

Cementitious screed material for use internally in buildings

DoP No.: DUROCRET-DECO EPOXY/1273-01

Reaction to fire: F

Release of corrosive substances: CT

Water permeability: NPD

Water vapour permeability: NPD

Compressive strength: C50

Flexural strength: F10

Wear resistance: AR0.5

Sound insulation: NPD

Sound absorption: NPD

Thermal resistance: NPD

Chemical resistance: NPD

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