

2-component, self-leveling, conductible epoxy floor

Description

DUROFLOOR-C is a 2-component, solvent-free, colored epoxy system, offering permanent conductivity that prevents the appearance of static electricity charges on surfaces. It has a conductivity resistance between 10^4 and 10^6 Ohm. DUROFLOOR-C has high strength and abrasion resistance, it is resistant to organic and inorganic acids, alkalis, petroleum products, a number of solvents, waste, water, sea water and weather conditions.

It is classified as SR-B2,0-AR0,5-IR4 according to EN13813.

Hardness according to SHORE D:

80

Walkability:

after 24 h at +23°C

Successive layer:

after 24 h at +23°C

Final strength:

after 7 days at +23°C

Compressive strength: 43,2 N/mm²
(DIN EN 196-1)

Flexural strength: 25,3 N/mm²
(DIN EN 196-1)

Adhesive strength: > 3 N/mm² (breaking point of concrete)

Cleaning of tools:

Tools should be cleaned with SM-12 solvent immediately after use.

Fields of application

DUROFLOOR-C is used as a floated, self-leveling screed on cement-based floors, in cases that static electricity causes problems. It is suitable for computer rooms, laboratories, printing rooms, textile mills, hospitals, gas stations, electrical stations, ammunition store-rooms etc.

Technical data

Basis:	2-component epoxy resin
Colors:	RAL 7040 (grey) RAL 1015 (beige) other colors by special order
Viscosity:	approx. 5.700 mPa·s at +23°C
Density (A+B):	1,45 kg/lit
Mixing proportion (A:B):	100:25 by weight
Pot life:	approx. 40 min at +20°C
Reaction to fire (EN 13501-1):	E _{fl}
Minimum hardening temperature:	+8°C

Directions for use

1. Substrate

The flooring surface should be:

- Dry and stable.
- Free of materials that prevent bonding, e.g. dust, loose particles, grease etc.
- Protected from underneath moisture attack.

Also, it should meet the following requirements:

Concrete quality: at least C20/25
Cement screed quality: cement content 350 kg/m³

Age: at least 28 days

Moisture content: less than 4%

According to the nature of the substrate, it should be prepared by brushing, grinding, sand blasting, water blasting, pellet blasting, etc. Following this, the surface should be cleaned from dust with a high suction vacuum cleaner.

2. Priming

The surface is primed with DUROFLOOR-PSF or DUOPRIMER epoxy primers.

Consumption: 200-300 g/m².

After the primer has dried, any existing imperfections (cracks, holes) should be filled using DUROFLOOR-PSF mixed with quartz sand, with a particle size of 0-0,4 mm (or Q35), in proportions of 1:2 up to 1:3 by weight. The application of the conductible floor should take place within 24 hours after priming. In case that the conductible floor will be applied beyond 24 hours after priming quartz sand with a particle size of 0,4-0,8 mm should be spread on the surface, while the primer is still fresh, in order to assure good bonding. After hardening of DUROFLOOR-PSF, any loose grains should be removed using a high suction vacuum cleaner.

Wet substrate

When the substrate contains humidity more than 4% or it's a fresh concrete substrate (3-28 days), the surface should be primed with the water-based 3-component primer DUOPRIMER-W.

3. Conductible layer

After hardening of the primer, the special self-adhesive copper-bands (conductors) should be installed on the floor in a grid formation of at least 5m x 5m and connected to the ground through a perimetrical cable.

Afterwards, the surface is coated with DUROFLOOR-CV conductible epoxy varnish, applied by roller in a thin layer.

Consumption: approx. 200 g/m².

DUROFLOOR-C should be applied within the following 24 hours after DUROFLOOR-CV application, but after it has dried.

4. Application of self-leveling DUROFLOOR-C

a) Mixing of the components

Components A (resin) and B (hardener) are packed in two separate containers, having the correct predetermined mixing proportion by weight. The whole quantity of component B is added into component A. Mixing of the 2 components should take place for about 5 minutes, using a low revolution mixer (300 rpm). It is important to stir thoroughly the mixture near the sides and bottom of the container, to succeed uniform dispersion of the hardener.

b) Application - Consumption

DUROFLOOR-C is spread (dragged) on the floor using a smooth trowel, to a thickness of approx. 2mm.

Consumption: approx. 1,5 kg/m²/mm.

The self-leveling layer should be rolled with a special spiked roller, to help any possibly entrapped air to escape in order to avoid bubbles.

Packaging

DUROFLOOR-C is supplied in packages (A+B) of 10 kg, with components A and B having fixed weight proportions.

Shelf-life - Storage

12 months from date of production if stored in original sealed packaging, in areas protected from humidity and direct sun exposure.

Recommended storage temperature between +5°C and +35°C.

Remarks

- The workability of epoxy materials is affected by their temperature. The ideal temperature of application is between +15°C and +25°C so that the product will be easy to use and cure as prescribed. Room temperature below +15°C will expand the curing time and temperature above +30°C will accelerate the curing time. In winter time a mild preheating of the product is recommended, while in summer time to store the materials in a cool room before the application.
- Bonding between successive layers may be severely affected by the intervention moisture or dirt.
- Epoxy layers should be protected from moisture for 4-6 hours after application. Moisture may whiten the surface or/and make it sticky. It may also disturb hardening. Faded or sticky layers in parts of the surface should be removed by grinding or milling and laid again.
- In case that longer time than predicted interferes between the application of successive layers or in case that old floors are going to be laid again, the surface should be thoroughly cleaned and ground before application of the new layer.
- The conductible fibers contained in DUROFLOOR-C cause a slight differentiation in its color in relation to the corresponding RAL code.
- After hardening, DUROFLOOR-C is totally safe for health.
- Before application, study the safety advice mentioned on the product's labels.

Volatile organic compounds (VOCs)

According to the Directive 2004/42/CE (Annex II, table A), the maximum allowed VOC content for the product subcategory j, type SB is 500g/l (2010) for the ready to use product.

The ready to use product DUROFLOOR-C contains max <500 g/l VOC.



ISOMAT S.A.

17th km Thessaloniki – Ag. Athanasios
P.O. BOX 1043, 570 03 Ag Athanasios, Greece

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EN 13813 SR-B2,0-AR0,5-IR4

Synthetic Resin screed material for use internally in buildings

Reaction to fire: E_{fl}

Release of corrosive substances: SR

Water permeability : NPD

Wear resistance: AR0,5

Bond strength: B2,0

Impact resistance: IR4

Sound insulation: NPD

Sound absorption: NPD

Thermal resistance: NPD

Chemical resistance: NPD

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BUILDING CHEMICALS AND MORTARS

MAIN OFFICES - FACTORY:

17th km Thessaloniki - Ag. Athanasios Road,
P.O. BOX 1043, 570 03 Ag. Athanasios, Greece,
Tel.: +30 2310 576 000, Fax: +30 2310 722 475

www.isomat.net e-mail: info@isomat.net

