

DUROFLOOR-C

Two-component, self-leveling, conductive epoxy flooring

Description

DUROFLOOR-C is a two-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.

Certified according to EN 13813 and classified as SR-B2.0-AR0.5-IR4. CE marked.

* These values may vary depending on on-site conditions (temperature, humidity, etc.) and the equipment used to take the readings.

Fields of application

DUROFLOOR-C is used as a self-leveling floor coating on cementitious floors to eliminate the risk of spark generation caused by static electricity. Suitable for computer rooms, laboratories, printing rooms, textile mills, gas stations, electrical stations, ammunition storerooms, etc.

Technical data

Basis:	2-component epoxy resin
Colors:	RAL 7040 (window grey) other colors upon order
Viscosity:	approx. 5,700 mPa·s (+23°C)
Density (A+B):	1.45 kg/l
Mixing ratio (A:B):	100:25 by weight
Pot life:	approx. 40 min (+20°C)
Reaction to fire (EN 13501-1):	E _{fl}
Minimum hardening temperature:	+8°C
SHORE D hardness:	80
Walkability:	after 24 h at +23°C

Recoat time:	after 24 h at +23°C
Final strength:	after 7 days at +23°C
Compressive strength: (DIN EN 196-1)	43.2 N/mm ²
Flexural strength: (DIN EN 196-1)	25.3 N/mm ²
Adhesion strength:	> 3 N/mm ² (breaking point of concrete)

Cleaning of tools:
Tools should be cleaned with SM-25 solvent immediately after use.

Directions for use

1. Substrate

The flooring surface should be:

- Dry and stable.
- Free of materials that might impair 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/m ³
Age:	at least 28 days
Moisture content:	less than 4%

Depending on the nature of the substrate, it should be prepared by brushing, grinding, sandblasting, water blasting, shot 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 DUROPRIMER 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 conductive floor should take place within 24 hours after priming.

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If the conductive floor is to be applied 24 hours after priming, quartz sand with a particle size of 0.3-0.8 mm should be spread on the surface, while the primer is still fresh, in order to ensure good bonding. After hardening of DUROFLOOR-PSF, any loose grains should be removed using a high-suction vacuum cleaner.

Wet substrate

If the product is to be applied to a substrate with a moisture content of > 4% or to a fresh concrete floor (3-28 days), the surface should be primed with the water-based 3-component primer DUROPRIMER-W.

3. Conductive layer

After drying of the primer, the special self-adhesive copper tapes (conductors) should be installed on the floor in a grid formation of approximately 5 m x 5 m and connected to the ground through a perimeter cable.

Afterwards, the surface is coated with DUROFLOOR-CV conductive epoxy varnish, applied with a 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 packaged in two separate containers, at the correct predetermined mixing ratio by weight. Before mixing, component A is stirred mechanically for 1 min. Then, all of component B is added to component A and the two components are mixed continuously for about 5 min with a low-speed mixer (300 rpm) until a uniform mix is obtained. It is important to thoroughly stir the mixture near the sides and bottom of the container to achieve uniform dispersion of the hardener. To ensure thorough mixing, the mixture is poured into a clean container and mixed again for at least 1 min until fully homogeneous.

b) Application - Consumption

DUROFLOOR-C is spread (dragged) on the floor using a smooth trowel, to a thickness of approx. 1.5 mm.

Consumption: approx. 1.5 kg/m²/mm.

The self-leveling layer should be rolled with a special spiked roller to help any entrapped air escape and prevent bubble formation.

Packaging

DUROFLOOR-C is supplied in 10 kg containers (A+B), 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 sunlight. 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 for which the product obtains optimal workability and curing time. Room temperature below +15°C will extend curing time while temperatures above +30°C will reduce it. It is recommended to mildly preheat the product during winter, and store the product in a cool room before application during summer.
- Bonding between successive layers may be severely affected by 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 hinder hardening. Faded or sticky layers in parts of the surface should be removed by grinding or milling and laid again.
- In case recoat time (between successive layers) is longer than expected or in case old floors are to be overlaid again, the surface should be thoroughly cleaned and ground before applying the new layer.
- The conductive fibers contained in DUROFLOOR-C cause a slight variation in its color in relation to the corresponding RAL code.
- After hardening DUROFLOOR-C is totally safe for health.

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- Please consult the directions for safe use and precautions 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 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

DoP No.: DUROFLOOR-C/1800-02

Reaction to fire: E_{fl}

Release of corrosive substances: SR

Wear resistance: AR0,5

Bond strength: B2,0

Impact resistance: IR4

ISOMAT S.A.

BUILDING CHEMICALS, MORTARS & PAINTS

HEADQUARTERS – THESSALONIKI, GREECE

17th km Thessaloniki – Ag. Athanasios Road

P.O. BOX 1043, 570 03 Ag. Athanasios, Greece

T +30 2310 576000

www.isomat.eu e-mail: support@isomat.eu