

DUROFLOOR-R

Two-component, roller-applied epoxy coating

Description

DUROFLOOR-R is a two-component, colored epoxy system, offering high strength and abrasion resistance. It is resistant to organic and inorganic acids, alkalis, petroleum products, waste, water, sea water and weather conditions. It is also resistant to temperatures from -30°C to +100°C in dry loading and up to +60°C in wet loading. Certified according to EN13813 and classified as SR-B2,0-AR0,5-IR4. CE marked.

Fields of application

DUROFLOOR-R is used as a roller-applied coating for floors requiring high mechanical and chemical strength. It is suitable for cement-based substrates, e.g. concrete, cement mortars, as well as for steel or iron surfaces in industrial areas, warehouses, laboratories, hospitals, wine factories, slaughterhouses, canning industries, garages, car repair shops, etc. It is also suitable for food contact surfaces, according to W-347, ISO 8467. It complies with LEED requirements (Rule 1113 – SCQAMD) regarding Volatile Organic Compound (VOC) Limits, categorized as Industrial Maintenance (IM) coatings, Code 19, VOC Limit: <100 g/l.

Technical data

Basis:	two-component epoxy resin
Colors:	RAL 7032 (sand grey) RAL 7035 (light grey) RAL 7040 (grey) RAL 3009 (red-brown) RAL 1015 (beige) RAL 1013 (white-beige) RAL 6021 (light green) RAL 5024 (pastel blue) other colors by special order
Viscosity:	approx. 1,900 mPa·s at +23°C
Density (A+B):	1.46 kg/l
Mixing ratio (A:B):	100:25 by weight
Pot life:	~ 40 min at +20°C

Minimum hardening temperature:	+8°C
Water absorption: (ASTM D 570)	0.29% w/w (24 h)
Reaction to fire (EN 13501-1):	B _{fl} - s1*
Hardness according to SHORE D:	80
Walkability:	after 24 h at +23°C
Successive layer:	after 16 h at +23°C
Final strength:	after 7 days at +23°C
Abrasion resistance: (ASTM D 4060, TABER TEST, CS 10/1000/1000)	76.6 mg
Compressive strength: (EN 13892-2)	≥ 52 N/mm ²
Flexural strength: (EN 13892-2)	≥ 34 N/mm ²
Adhesion strength:	≥ 3 N/mm ²
Cleaning of tools:	Tools should be cleaned with SM-12 solvent immediately after use.

*With epoxy primer DUROFLOOR-PSF as a system. Report No 17/14153-890 M1, APPLUS Laboratories – LGAI, Spain, June 2017.

Directions for use

1. Substrate preparation

The flooring surface should be:

- Dry and stable.
- Free of materials that might hinder adhesion, e.g. dust, loose particles, grease, etc.
- Protected from negative water pressure.

Also, it should meet the following requirements:

a) Cementitious substrates:

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%

DUROFLOOR-R

b) Iron or steel surfaces:

It should be free of rust or any corrosion that may prevent bonding.

Depending on the nature of the substrate, it should be prepared by brushing, grinding, sand blasting, water blasting, shot blasting, etc. Then, the surface should be cleaned from dust with a high suction vacuum cleaner.

2. Priming

Cementitious surfaces should be 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-R mixed with quartz sand with 0-0.4 mm particle size (or Q35 quartz sand) at a 1:1.5 up to 1:2 ratio by weight or using DUROFLOOR-PSF mixed with quartz sand with 0-0.4 mm particle size (or Q35 quartz sand) at a 1:2 up to 1:3 ratio by weight.

Metal substrates should be primed with EPOXYCOAT-AC anticorrosive epoxy coating. DUROFLOOR-R should be applied within 24 hours from priming.

In case DUROFLOOR-R will be applied after the first 24 hours, quartz sand with 0.4-0.8 mm particle size should be spread on the surface, while the primer is still fresh, in order to ensure good bonding. After the primer has hardened, any loose grains should be removed with a high suction vacuum cleaner.

Wet substrate

In case of a wet substrate (moisture > 4%) or a fresh concrete floor (3-28 days), the surface should be primed with the three-component, water-based epoxy primer DUROPRIMER-W.

3. Mixing of the components

Components A (resin) and B (hardener) are packaged in two separate containers, having the correct fixed mixing ratio by weight. Before application it is recommended to slightly stir component A for 1 min. The entire contents of component B is added to component A. The two components should be mixed for about 3 minutes with a low speed mixer (300 rpm).

It is important to stir the mixture thoroughly near the sides and bottom of the container, to achieve uniform dispersion of the hardener.

4. Application – Consumption

Depending on the required form of the final surface, there are two cases of application:

a) Smooth final surface

DUROFLOOR-R is applied by roller in two layers. The second layer should be applied after the first one has dried, but within 24 hours.

Consumption: Approx. 250-300 g/m²/layer.

b) Slip-resistant final surface

DUROFLOOR-R is applied by roller in one layer.

Consumption: approx. 250-300 g/m².

While the layer is still fresh, quartz sand is broadcast (0.1-0.8 mm or 0.4-0.8 mm particle size, depending on the desired anti-slip effect).

Consumption of quartz sand: approx. 3 kg/m².

After DUROFLOOR-R has hardened, any loose grains should be removed with a vacuum cleaner. Finally, a finishing layer of DUROFLOOR-R is applied.

Consumption: 400-600 g/m².

Packaging

DUROFLOOR-R is supplied in containers (A+B) of 10 kg, with components A and B having a fixed mixing ratio by weight.

Shelf life – Storage

12 months from production date 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 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 in the winter, and store the product in a cool room before application in the summer.

DUROFLOOR-R

- Bonding between successive layers may be severely affected by moisture or dirt present between them.
- 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 recoat time 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.
- In case DUROFLOOR-R will be used on vertical or inclined surfaces an epoxy flow regulator should be added at a ratio of 2.0% by weight.
- After hardening, DUROFLOOR-R is totally safe for health.
- 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 j, type SB is 500 g/l (2010) for the ready-to-use product.

The ready-to-use product DUROFLOOR-R contains 60 g/l VOC.


<p>ISOMAT S.A. 17th km Thessaloniki – Ag. Athanasios P.O. BOX 1043, 570 03 Ag. Athanasios, Greece</p> <p>08</p>
<p>DoP No.: DUROFLOOR-R/1800-01 EN 13813 SR-B2,0-AR0,5-IR4 Synthetic Resin screed material for use internally in buildings</p>
<p>Reaction to fire: B_{fl} - s1 Release of corrosive substances: SR Water permeability: NPD Wear resistance: AR0,5 Adhesion: B2,0 Impact resistance: IR4 Sound insulation: NPD Sound absorption: NPD Thermal resistance: NPD Chemical resistance: NPD</p>

DUROFLOOR-R



 2032
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2032-CPR-10.11 DoP No.: DUROFLOOR-R / 1863-01 EN 1504-2 Surface protection products Coating Permeability to CO ₂ : Sd > 50m Water vapor permeability: Class I (permeable) Capillary absorption: w < 0.1 kg/m ² ·h ^{0.5} Adhesion: ≥ 0.8 N/mm ² Reaction to fire: B _{fl} - s1 Dangerous substances comply with 5.3

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