Technical Datasheet

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 EN 1504-2 and classified as coating for surface protection of concrete. Certificate No: 2032-CPR-10.11.
Also certified according to EN 13813 and classified as SR-B2.0-AR0.5-IR4. CE marked.
DUROFLOOR-R has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts. Registration No: EPD-IES-0016841, The International EPD® System.

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 – SCAQMD) regarding Volatile Organic Compound (VOC) Limits, categorized as Industrial Maintenance (IM) coatings, Code 19, VOC Limit: <100 g/l.

Technical data

Base:	two-component epoxy resin
Colors:	RAL 7032 (pebble grey) RAL 7035 (light grey) RAL 7040 (window grey) other colors upon order
Viscosity:	~ 1,900 mPa·s at +23°C
Density (A+B):	1.46 kg/l
Solid content:	~100%
Mixing ratio (A:B):	100:25 by weight
Pot life:	~ 40 min at +20°C
Water absorption: (ASTM D 570)	0.29% w/w (24 h)
Reaction to fire (EN 13501-1):	B_{fl} - s1*
Minimum hardening temperature:	+8°C
Hardness according to SHORE D:	80
Walkability:	after 24 h at +23°C
Recoat:	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
Abrasion resistance: (EN 13892-4)	< 50 μm
Compressive strength: (EN 13892-2)	≥ 52 N/mm^2
Flexural strength: (EN 13892-2)	≥ 34 N/mm^2
Adhesion strength:	≥ 3 N/mm^2

* Report No: 17/14153-890 M1, APPLUS Laboratories.

Cleaning of tools:
Tools should be cleaned with SM-27 solvent immediately after use.

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.

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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%

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, sandblasting, 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/m^2.
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 anti-corrosion 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 0.3-0.8 mm particle size should be spread on the surface, while the primer is still fresh 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 two-component epoxy primer DUROPRIMER-SG.

3. 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 3 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.

4. Application – Consumption
Depending on the required finish of the final surface, there are two cases of application:

a) Smooth finish
DUROFLOOR-R is applied with a 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/m^2/layer.

b) Slip-resistant finish
DUROFLOOR-R is applied by roller in one layer.
Consumption: approx. 250-300 g/m^2.
While the layer is still fresh, quartz sand is broadcast (0.1-0.4 mm or 0.3-0.8 mm particle size, depending on the desired anti-slip effect).
Consumption of quartz sand: approx. 3 kg/m^2.

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/m^2.

Packaging

DUROFLOOR-R is supplied in containers (A+B) of 10 kg and 24 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.

The technical information and instructions supplied in this datasheet are based on the knowledge and experience of the Department of Research and Development of our company and on results from long-term applications of the product in practice. The recommendations and suggestions referring to the use of the product are provided without guarantee, since site conditions during the applications are beyond the control of our company. Therefore the user is responsible for confirming that the chosen product is suitable for the envisaged application. The present edition of this technical datasheet automatically cancels any previous one concerning the same product. | Edition: 25.09.2025

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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 prolong 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.
- 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.

CE

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DoP No.: DUROFLOOR-R/1800-02

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

Synthetic Resin screed material for use internally in buildings

Reaction to fire: B_{fl} - s1
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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2032-CPR-10.11

DoP No.: DUROFLOOR-R / 1863-02

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 strength by pull off test: ≥ 2.0 N/mm^2

Reaction to fire: B_{fl} - s1

Dangerous substances comply with 5.3

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