

Technical Datasheet

EPOXYCOAT-W

Two-component, water-based epoxy coating

Description	Technical data
EPOXYCOAT-W is a two-component, colored, water-based epoxy system offering high strength and abrasion resistance to walls and floors. It is resistant to acids, alkalis, petroleum products, water and seawater. It is ideal for indoor use and is the preferred choice in applications where the use of solvents may pose a concern. Certified according to EN 1504-2 and classified as a coating for surface protection of concrete. Certification No.: 2032-CPR-10.11. Also certified according to EN 13813 and classified as a SR-B2,0-AR0,5-IR5 type floor coating material. CE marked. Certified as suitable for use on surfaces intended to come into contact with foodstuffs. Certificate No.: 100-069763, TZUS. EPOXYCOAT-W has received an Environmental Product Declaration (EPD) following an assessment of its life-cycle environmental impacts. Registration No: EPD-IES-0009186, The International EPD® System.	Base: 2-component epoxy resin Colors: RAL 7035 (light grey) and tintable to other RAL colors through the available bases P & TR Viscosity: 4,200 mPa.s (+ 23°C) Density: 1.32 kg/l Mixing ratio (A:B): 100:23 by weight Pot life: ~ 90 min (+20°C) Volume solids: ~ 69% Minimum hardening temperature: +8°C Walkability: after 24 h (+ 23°C) Overcoat time: after 8-48 h (+ 23°C) Final strength: after 7 days (+ 23°C) Abrasion resistance: < 3,000 mg (EN ISO 5470-1) Capillary absorption and permeability to water: 0.01 kg/m²·h^{0.5} (EN 1062-3, requirement of EN 1504-2: w < 0.1) Resistance to thermal shock: a) No bubbles, cracks or delamination (EN 13687-5) b) Pull-off test: ≥ 2 N/mm² Impact resistance: 5 Nm (Class I) (EN ISO 6272-1) Adhesion strength by pull off test: > 3 N/mm² (breaking point of concrete) (EN 1542)
Fields of application	
EPOXYCOAT-W is used as a protective and decorative coating on floors and walls, on cement-based substrates (e.g. concrete, plaster, screed, etc.) and metal surfaces. <u>Application to walls:</u> Suitable for industrial sites, workshops, slaughterhouses, canned food factories, wineries, tunnels, etc. <u>Application to floors:</u> Suitable for floors where medium mechanical stress is expected, such as storage areas and car parks. EPOXYCOAT-W, in combination with the thixotropic cementitious repair mortar MEGACRET-50 THIXO, has been successfully tested as a suitable coating for the protection of tunnel inner shells, in accordance with the ÖBV guideline "Tunnel Coatings" (ÖBV-Merkblatt Tunnelbeschichtungen).	

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Permeability to CO ₂ : (EN 1062-6)	Sd > 200 m
Reaction to fire: (EN 13501-1)	Euroclass B-s1,d0*
SHORE D hardness:	75
Abrasion resistance: (EN 13892-4)	< 50 µm
(EN 13892-4)* Report No: 20/23451-1854, APPLUS Laboratories.	

Properties according to ÖBV guideline

Thermal compatibility – Freeze-thaw cycles with immersion in de-icing salts: (EN 13687-1)	no cracks ≥ 0.1 mm, cavities, or weathering
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Thermal compatibility – Thunder-shower cycling (thermal shock): (EN 13687-2)	no cracks ≥ 0.1 mm, cavities, or weathering
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Chloride penetration after freeze-thaw exposure: (EN 14629)	Pass, at 5-10 mm depth within the concrete mass
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Wet scrub resistance: (EN 13300)	Class I (< 5 µm)
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Visible light reflectance value: (BS 8493)	LRV (RAL 1015) 72 (Class 70)
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Cleaning of tools:
Tools should be cleaned with water immediately after use.

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 substrates

Should be free of rust or any dirt that prevents adhesion. Depending on the nature of the substrate, it should be treated by brushing, grinding, sandblasting, shot blasting, water blasting, etc. Following this, the surface should be cleaned from dust with a high-suction vacuum cleaner.

2. Priming

a) Cementitious substrates

Cement-based surfaces are primed using EPOXYCOAT-W diluted with water up to 20% by weight.
Consumption of EPOXYCOAT-W: ~ 150 g/m².

b) Metal substrates

Metal substrates are primed using EPOXYCOAT-AC anti-corrosion epoxy coating in one or two layers.
Consumption EPOXYCOAT-AC: ~ 150 g/m²/layer.

3. Mixing of EPOXYCOAT-W

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.

Directions for use

1. Substrate

The surface to be coated should be:

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

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4. Application – Consumption

EPOXYCOAT-W should be applied after the primer has dried but within 48 hours.

Depending on the desired surface finish, there are two application methods:

a) Smooth finish

EPOXYCOAT-W is applied as is or diluted with water up to 10% by weight with a roller, brush or spray in at least two coats. The second coat is applied one the first has dried but within 48 hours.

Consumption:

- Application to walls: 150-250 g/m²/coat
- Application to floors: 250-300 g/m²/coat

b) Non-slip finish for floors

EPOXYCOAT-W is applied as is or diluted with water up to 10% by weight with a roller, brush or spray in one coat.

Consumption: 250-300 g/m².

Then, quartz sand of 0.1-0.4 mm or 0.3-0.8 mm particle size is broadcast over the still fresh EPOXYCOAT-W layer to provide the desired slip resistance level.

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

After EPOXYCOAT-W has hardened, any loose grains should be removed with a high-suction vacuum cleaner. Finally, a sealing EPOXYCOAT-W layer is applied as is or diluted with water up to 10% by weight.

Consumption: 400-600 g/m².

Packaging

EPOXYCOAT-W is supplied in containers (A+B) of 3 kg and 9 kg, with components A and B delivered in separate containers with fixed mixing ratio.

Shelf life – Storage

12 months from production date if stored in original, unopened packaging, in temperature between +5°C and +35°C. Protect from direct sunlight and frost.

Remarks

- The workability of epoxy materials is affected by temperature. The ideal application temperature ranges 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 prolong the curing time while temperatures above +30°C will accelerate it. It is recommended that the products are mildly preheated in winter while in summer the materials must be stored in a cool room prior to application.
- Bonding between successive layers may be severely affected by moisture or dirt present between them.
- 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.
- Consult the directions for safe use and precautions written on the packaging before use.
- EPOXYCOAT-W is intended for professional use only.

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 WB, is 140 g/l (2010) for the ready to use product.

The ready-to-use product EPOXYCOAT-W contains max. 140 g/l VOC.

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