

COATIX® EP 3565 Self-Leveling

Solvent-Free Epoxy Self-Leveling Floor Coating with High Chemical Resistance

Product Description

COATIX® EP 3565 Self-Leveling is a solvent-free, two-component, epoxy resin-based, coloured, self-leveling floor coating material. Thanks to its special resin/hardener composition, it offers outstanding resistance to acids, alkalis and many aggressive chemicals. It forms a smooth, seamless and non-porous surface; with its high mechanical strength and resistance to friction and abrasion, it is used on industrial floors exposed to heavy forklift traffic and corrosive chemical loads. Thanks to its hard, glass-like and smooth finish, it is easy to clean and suitable for hygienic and sterile conditions.

Areas of Use

- Chemical and pharmaceutical industry facilities, treatment plants, acid/alkali filling and storage areas
- Battery, galvanising, surface finishing and metalworking facilities, production areas where corrosive chemicals are used
- Factories, warehouses, assembly and maintenance workshops, floors exposed to heavy forklift traffic
- Food, beverage, dairy, paint and paper industry facilities
- Hospitals, laboratories and sterile environments requiring hygiene
- Industrial kitchens, canteens, laundries and slaughterhouses
- Aircraft hangars, loading ramps, shopping centres, schools and car parks

Thickness can be increased by adding quartz/silica filler; a slip-resistant (sand-broadcast) system can be obtained by broadcasting quartz onto the fresh surface.

Advantages

- Outstanding resistance to acids, alkalis, salt solutions and many aggressive chemicals
- Solvent-free; provides low emissions during application
- Self-leveling; forms a smooth, seamless and non-porous surface
- High mechanical strength and resistance to friction and abrasion
- Liquid-tight; suitable for hygienic and sterile conditions
- Easy to clean thanks to its smooth, hard, glass-like surface; requires no maintenance for a long time
- Thickness can be increased by adding quartz/silica filler
- A slip-resistant (sand-broadcast) surface can be obtained by broadcasting quartz
- Can be produced in the shades of the RAL colour chart

Technical Properties

General Information	
Material structure	Three-component, coloured, epoxy resin-based (A: resin, B: hardener, C: quartz)
Appearance / Colour	Component A (resin): Coloured liquid – in RAL colour chart shades* Component B (hardener): Light yellow, transparent liquid Component C: Dried quartz sand
Density (mixture A+B)	1.55–1.65 g/cm ³ / 23°C (EN ISO 2811-1)
Density (mixture, including quartz)	1.75–1.85 g/cm ³ / 23°C (EN ISO 2811-1)
Consistency	Self-leveling

Volatile organic compounds (VOC)	≤ 10 g/L – 2004/42/EC (Cat. IIA/j, SB; limit 500 g/L)
Solids content	100% (by weight)
Service temperature	0°C / +80°C
Mechanical Properties	
Compressive strength (ASTM D695 / EN ISO 604)	75–85 N/mm ²
Flexural strength (EN ISO 178)	20–30 N/mm ²
Tensile strength (EN ISO 527)	15–20 N/mm ²
Shore D hardness (ASTM D 2240 / DIN 53505)	85 ± 5 (80–85)
Abrasion resistance – Taber (EN 1504-2)	115 mg (CS 10 / 1,000 g / 1,000 cycles)
Pull-off adhesion strength (EN 1542 / EN 1504-2)	≥ 2.0 (1.5) ^b N/mm ² – concrete failure
Impact resistance (EN 1504-2)	Class III (≥ 20 Nm)
Capillary absorption and permeability to water (EN 1504-2)	≤ 0.1 kg/m ² ·h ^{0.5}
Application Information	
Mixing ratio (A / B)	6 / 1 (by weight)
Mixing ratio (A / B / C, including quartz)	60 / 10 / 30 (by weight)
Thinner	Do not thin
Application method	Spreading with a trowel, notched trowel or adjustable screed rake, air release with a spiked roller
Pot life	30–40 min / 23°C, 25 kg (DIN 16945 / EN ISO 9514)
Consumption	1.80 kg/m ² for 1 mm thickness (including quartz) Minimum application thickness 1.0 mm
Application temperature (ambient and substrate)	+10°C / +30°C
Permissible substrate moisture	Max. 4% by weight
Ambient relative humidity	Max. 80%
Drying Times	
Dust-dry	3–4 hours / 23°C (EN ISO 9117)
Touch-dry	10–12 hours / 23°C (EN ISO 9117)
Foot traffic	24 hours / 23°C
Full cure	7 days / 23°C (EN ISO 9117)
Recoat interval	Min. 24 hours – max. 48 hours / 23°C
Pot Life (for 25 kg mixture)	
+10°C	~ 70 minutes
+20°C	~ 40 minutes
+30°C	~ 20 minutes

Safety Information	
Reaction to fire class (EN 13501-1)	B _n -s1
Hazardous substances	Refer to SDS

* Excluding metallic, fluorescent and 4000 series colours. The colour shade may change under direct sunlight; this does not affect the performance of the coating.

The technical values stated were obtained at +23°C ambient temperature and 50% relative humidity; times are extended as ambient and surface temperatures fall and shortened as they rise.

Application Instructions

Surface Preparation

The concrete surface must be cured (at least 28 days), clean, sound and have adequate compressive strength (at least 25 N/mm²). The pull-off strength of the surface must not be less than 1.5 N/mm². Weak parts must be removed by scarifying, sandblasting or sanding; laitance must be removed to obtain an open-pored surface. If the surface is very glossy, it must be roughened by scarifying or sandblasting to increase the specific surface area. The surface must be free of adhesion-impairing substances such as oil, tar, bitumen, silicone, curing compounds, detergent and formwork release oil; oily areas must be cleaned by burning off, and dirt and dust must be removed with a vacuum cleaner. Blowholes and holes must be exposed and filled with a suitable repair mortar. Before application, the surface must always be primed with COATIX® EP 1180 Primer epoxy primer, forming a pore-free, continuous primer film. COATIX® EP 3565 Self-Leveling must be applied no later than 24 hours after primer application.

Moisture Control

Before application, the moisture content of the concrete must be measured with a moisture meter; the permissible moisture limit is max. 4% by weight. If no moisture meter is available, a 1 m x 1 m plastic sheet is taped to the surface and left for 24 hours; if there is no condensation under the sheet when checked in the morning, application may proceed. Attention must also be paid to the dew point before application; the surface temperature must be at least 3°C above the dew point. The product must not be applied on floors with rising damp.

Mixing

Component A must be stirred mechanically on its own until homogeneous before mixing. Once component B has been added in full to component A (A/B: 6/1 by weight), mix with a drill fitted with a low-speed (300–400 rpm) mixing paddle until a homogeneous mixture is obtained. The quartz sand (component C) must be added at low speed while mixing and mixed again until homogeneous. To minimise air entrainment, avoid over-mixing and mixing at high speed. The entire mixture must be transferred to a clean container and briefly mixed again; no unmixed material may remain at the bottom of the pail.

Water, solvent or thinner must never be added to the mixture. The components are packaged in the correct proportions; if only part of the product is to be used, the mixing ratio must be maintained by weighing. With large batches, the pot life is shortened and insufficient time remains for application. Materials must be brought to the application area at least 24 hours before application so that they adapt to ambient conditions.

Quartz Quantity

The quartz for COATIX® EP 3565 Self-Leveling is supplied in separate 7.5 kg packages. In summer months, the entire bag must be used and the quantity increased if necessary; quartz in excess of the packaged quantity must be procured separately. If too little quartz is added, excessive flow will occur, making high spots in the floor more noticeable and reducing strength. Recommended quartz quantity for the 17.5 kg set (A: 15.0 kg + B: 2.5 kg) according to weather conditions:

Air temperature	Quartz (C) quantity
+28°C and above	10 kg
+23°C – +28°C	7.5 kg
+10°C – +23°C	6 kg

Application of the Coating

- After mixing, the mixture may be left to stand briefly (1–2 minutes) to allow entrained air to escape.

- COATIX® EP 3565 Self-Leveling is poured onto the primed surface and spread to the specified thickness with a trowel, notched trowel or adjustable screed rake. In self-leveling applications, the thickness must be at least 1.0 mm; a thickness of 2.0–3.0 mm is recommended in areas with high chemical loads.
- Immediately after spreading, the entire surface is rolled with a spiked roller to release air bubbles. Spiked shoes must be worn during this operation.
- If the system is designed to be thicker, quartz is broadcast while the primer is wet; the next day, loose quartz grains are removed by sweeping and scraping, and COATIX® EP 3565 Self-Leveling is applied by trowel as a scratch coat. Once it has hardened, the top coat is applied by trowel a second time at the consumption corresponding to the required thickness.
- If a slip-resistant (sand-broadcast) surface is required, 200–500 micron or 300–800 micron quartz sand is broadcast to saturation onto the fresh surface after approximately 15 minutes at +20°C and before 30 minutes have elapsed at the latest. After curing, excess sand is swept off and the surface is coated with the chemical-resistant epoxy top coat COATIX® EP 4565 Top Coat.
- In multi-coat applications, the recoat interval (max. 48 hours at 23°C) must not be exceeded; if it is exceeded, the underlying layer must be roughened by mechanical methods.
- To avoid colour differences, product with the same batch number must be used in the same area.

After application, the surface must be kept closed to foot traffic for at least 24 hours and protected from contact with water for 48 hours. The product reaches full cure after 7 days at 23°C, attaining its final resistance to mechanical loads and chemical attack.

Chemical Resistance

Chemical	Concentration	Resistance
Resistance to acids		
Sulphuric acid (H ₂ SO ₄)	10%	3
Sulphuric acid (H ₂ SO ₄)	20%	3
Sulphuric acid (H ₂ SO ₄)	30%	3~2
Hydrochloric acid (HCl)	10%	3
Hydrochloric acid (HCl)	20%	3
Hydrochloric acid (HCl)	35%	3~2
Phosphoric acid (H ₃ PO ₄)	15%	3
Phosphoric acid (H ₃ PO ₄)	30%	3~2
Phosphoric acid (H ₃ PO ₄)	45%	2
Nitric acid (HNO ₃)	10%	3
Nitric acid (HNO ₃)	20%	3
Citric acid (C ₆ H ₈ O ₇)	25%	3
Citric acid (C ₆ H ₈ O ₇)	50%	2
Citric acid (C ₆ H ₈ O ₇)	75%	2~1
Acetic acid (CH ₃ COOH)	10%	3~2
Acetic acid (CH ₃ COOH)	20%	2
Acetic acid (CH ₃ COOH)	30%	2~1
Formic acid (HCOOH)	10%	2~1
Formic acid (HCOOH)	20%	1
Lactic acid (CH ₃ CHOH-COOH)	15%	3
Lactic acid (CH ₃ CHOH-COOH)	30%	3~2

Chemical	Concentration	Resistance
Resistance to alkalis		
Sodium hydroxide (NaOH)	10%	3
Sodium hydroxide (NaOH)	50%	3
Ammonia (NH ₃)	10%	3
Ammonia (NH ₃)	20%	3
Ammonia (NH ₃)	35%	3~2
Resistance to solvents and others		
Xylene	-	3
Solvent naphtha	-	2
Ethyl alcohol	-	3
Butanol	-	3
White spirit	-	3
Petroleum / mineral oils / fuels (diesel, petrol)	-	3
Bleach (NaOCl)	-	3~2
Sugar solutions	-	3
Urea	-	3
Fruit juice concentrate	-	3~2
Printing ink	-	3~2
Sea water / salt solutions	-	3

3 Highly resistant to the listed chemicals.

2 Resistant to the listed chemicals.

1 Not resistant to the listed chemicals.

~ Tendency between the two values.

For environments with chemicals not listed in the table, please consult our company. Values were obtained at +23°C under laboratory conditions after 7 days of curing.

Limitations

- The product must be applied when the substrate and ambient temperatures are in the range of +10°C to +30°C.
- The product must not be applied on floors with rising damp; technical service must be consulted before application.
- No water, solvent or thinner may be added to the mixture; the product must not be thinned.
- Once prepared, the mixture must be used within the specified pot life; mixture that has exceeded its pot life must not be used.
- The coating must not be loaded or opened to vehicle traffic before it has fully cured.
- The product is not UV-resistant; yellowing and colour change may occur under direct sunlight. In outdoor applications, it must be overcoated with a UV-resistant aliphatic polyurethane top coat.
- If heating is required in the application area, use only electric warm-air blowers; do not use gas, oil or paraffin heaters.
- Do not apply in areas that are frozen, at risk of frost within 24 hours, or exposed to direct sunlight and wind.
- Failure to assess and repair cracks correctly before application may cause the cracks to reflect through the coating and shorten its service life.
- Chemical resistance values were obtained at 23°C under laboratory conditions on fully cured coating; for continuous contact, elevated temperatures and mixed chemical environments, technical service must be

consulted before application. Staining and discolouration may occur with all chemicals; this does not affect the performance of the coating.

Cleaning of Tools

Tools and equipment used must be cleaned with COATIX® T 9100 Epoxy Thinner before the product hardens. Hardened and/or cured material can only be removed mechanically.

Storage Conditions and Shelf Life

Container lids must be kept closed and label information complete. Follow the first-in, first-out rule and monitor expiry dates. The storage area must be dry, cool and well ventilated. The product must be stored in compliance with technical safety information and legal requirements. When stored between +15°C and +25°C in a dry, enclosed warehouse in unopened original packaging, the product has a shelf life of 12 months from the date of manufacture. Protect from frost; if crystallisation is observed in component A, the crystals can be dissolved by heating the container to between +60°C and +70°C.

Safety Precautions

Observe the safety signs and warnings on the packaging. Comply with the health and safety information given in the product's Safety Data Sheet (SDS). Ensure adequate ventilation during application; use a mask, gloves, goggles and protective work clothing. Avoid direct contact with the product and do not inhale vapours. In case of contact, wash with plenty of water; if swallowed, do not induce vomiting and seek medical advice immediately. Keep away from open flames and store out of the reach of children.

Liability

Our company is responsible only for the quality of the product. Any use of the product outside the scope of the written technical recommendations, including incorrect application or use under unsuitable conditions, is entirely the responsibility of the user. For more detailed technical information, please refer to the product catalogue or contact our representatives.

Packaging

Component A 15.0 kg + component B 2.5 kg = 17.5 kg set

Component C (quartz): 7.5 kg separate package – 25 kg system in total

KARTAŞ KİMYA LLC

Sumgayit Industrial Park

Kimyachilar Street 1, AZ 5002

Sumgayit, Azerbaijan

www.mrfix.az

Tel: +994 12 310 88 55 Mob: +994 10 347 00 10