KLB KÖTZTAL
Lacke + Beschichtungen GmbH

KLB-SYSTEM
EC 633 C

Self-levelling, low-shrink, cement-based, polymer-modified levelling mortar for layer thicknesses of 3 - 15 mm for commercially and industrially used coverings subject to medium loads

Packaging units

Article no.	Packaging	Content (kg)	Units/pallet
TM0001-24	Bag	25.00 kg	40

Product characteristics

Water addition/consumption	Approx. 4.4 - 4.5 litres of water / per bag (25 kg powder)
Processing time	5 °C / 41 °F : 35 minutes 20 °C / 68 °F: 30 minutes 28 °C / 82.4 °F : 20 minutes
Processing temperature	Minimum 5 °C / 41 °F – Maximum 28 °C / 82.4 °F (room and floor temperature)
Curing time (accessibility)	5 °C / 41 °F : > 16 hrs. 20 °C / 68 °F: 8 - 10 hrs. 28 °C / 82.4 °F : 6 - 8 hrs.
Curing	1 - 2 days until mechanical load at 20 °C / 68 °F
Further coatings	with reactive resin: 15 - 24 hours; 24 to 48 hours at > 75 % rel. humidity
Consumption	Approx. 5.4 - 6.0 kg /m² (powder) in a 3 mm layer thickness Approx. 1.8 - 2.0 kg /m² dry mortar per mm of layer thickness
Layer thickness	Preferably 3 - 6 mm, possible up to 15 mm
Colours	Grey
Shelf life	6 months (originally sealed) – **Store in a dry location!**

Product description

KLB-SYSTEM EC 633 C is a quick-hardening, high-strength, cement-based flowing mortar for levelling raw and old substrates as well as for equalising mineral substrates when higher layer thicknesses are required. To be used preferably for renovating older surfaces in industrial or commercial areas for subsequent reactive resin coating. Suitable for concrete, cement screed and other dimensionally stable screeds without any increased moisture penetration or rising damp.

The factory-prepared dry mortar is simply mixed with water on site and applied within the desired layer thickness of approx. 3 - 15 mm using a pin screed scraper. The mixture has a sufficiently long processing time and, thanks to its good levelling properties, is quick and easy to apply.

KLB-SYSTEM EC 633 C cures quickly and with reduced shrinkage. Depending on the climatic conditions, can be treated with **EP 724 E Haftgrund Super** after 15 - 24 hours, then coated with the recommended reactive resin coverings.

KLB-SYSTEM EC 633 C has a high compressive strength and is mechanically load-bearing.

Typical areas of application are commercially and industrially used areas subject to medium loads or industrial truck traffic with soft tyres.

KLB-SYSTEM EC 633 C is certified by EUROFINS and EMICODE® EC 1^{PLUS}; thus meets the requirements for a sustainable building certification according to DGNB, LEED or BREEAM; not only the German requirements of AgBB or ABG, but also the emissions regulations of many other European countries.

Area of application

- As a levelling and equalising layer prior to the application of reactive resin coatings within the recommended build-up.
- For the renovation of uneven, damaged substrates without any rising damp.
- For layer thicknesses of 3 - 15 mm.
- Commercial/industrial use with medium load requirements in the interior.
- For light to medium traffic with pneumatic-tyre industrial trucks.

Product features

- low-emission formulation
- easy application
- self-levelling
- quickly reworkable
- very good levelling
- coatable with reactive resins
- high compressive strengths
- non-combustible
- waterproof
- low-shrink
- EMICODE® EC 1PLUS certified

Technical data

Density	Fresh mortar approx. 2.15	kg/l	DIN EN ISO 2811-2 (20 °C / 68 °F)
Flexural strength	Approx. 8	N/mm²	DIN EN 13892-2 (after 28 days)
Compressive strength	Approx. 50	N/mm²	DIN EN ISO 2811-2 (20 °C / 68 °F)
Adhesive tensile strength	> 1.5	N/mm²	DIN EN 1542

The values established in tests are average values. Deviations from the product specification may occur.

Tests

The following external test certificates are available:

- Determination of the mechanical parameters and elongation during curing at IBF in Troisdorf ("Institute for Building Materials Testing and Flooring Research").
- Certified as low-emission according to EMICODE® EC 1^{PLUS} label.
- Product is compliant with DIN EN 13813: 2003-01.
- Classification of the fire behaviour with top sealant **EP 742 E** (one sealing layer) according DIN EN 13501-01:2010-01: $A2_{fl}$-s1

Note:

Please ask for the tested system build-up!

Build-up of coats

Application on permanently dry substrates

- Prepare the surfaces of raw, worn and contaminated substrates by milling and subsequent shot-blasting.
- Other sufficiently stable substrates can be prepared by shot-blasting or diamond grinding. Then vacuum carefully.

- For screeds, it is important to ensure that the compound does not run into the edge joints. Edge insulation strips are to be applied, also to built-in elements.
- Prime with the appropriate system primer **EC 940 Grund**. Consumption approx. 0.180 - 0.250 kg/m² for typically absorbent substrates.
- The substrate must no longer be absorbent; if necessary, give it another coat of primer, e.g. with highly absorbent substrates. The drying time until accessibility is approx. 1 hour depending on the absorption characteristics, temperature and relative humidity.
- Alternatively (especially with floor slabs in contact with the ground): prime with **EP 52 Spezialgrund** or **EP 53 Spezialgrund AgBB**; consumption approx. 0.3 - 0.4 kg/m², and scatter fully with quartz sand **Quarzsand 0.7/1.2 mm**; consumption approx. 2 - 3 kg/m². In case of highly porous and rough substrates, it may be necessary to apply another layer of primer, which is scattered with quartz sand **Quarzsand 0.7/1.2 mm**; consumption approx. 2 - 3 kg/m².
- **Important note: EP 724 E Haftgrund Super** must not be used as adhesion primer/primer underneath **EC 633 C**.
- When the primer is sufficiently dry, apply the flow mortar **EC 633 C** with a pin screed scraper within the desired layer thickness. Consumption: approx. 5.4 - 6.0 kg/m² (fresh mortar) at a layer thickness of 3 mm; for thicker layers, the volume of material required will increase by approx. 1.8 - 2 kg/m² per 1 mm.
- After 8 - 16 hours, prime with **EP 724 E Haftgrund Super** to which 10 - 15% water has been added; consumption approx. 0.200 - 0.400 kg/m².
- Optional: if the surface cannot be made pore-free, a pore-closing scratch coat can be applied with a smoothing trowel using **EP 724 E** to which 5% water and 20% quartz sand 0.1/0.3 mm + optional 5% of supporting grain quartz sand 0.3/0.8 mm have been added, consumption approx. 0.6 - 0.8 kg/m² (mixture).
- After curing for 8 to 16 hours, subsequent coatings can be applied onto the surface, which has been primed or treated with a scratch coat.
- **EP 202**, **EP 216 Universal**, **EP 785 HS** and **PU 420** are suitable for this.
- Areas subject to light loads (e.g. with fire class $A2_{fl}$) can alternatively be sealed by rolling **EP 742 E** in two layers. Consumption: approx. 0.18 - 0.25 kg/m² per sealing layer.

Optimising the bond with quartz sand scattering

- Scattering with quartz sand of grain sizes 0.1/0.3 or 0.1/0.5 mm (for scattered coatings also 0.3/0.8 mm), can create an optimal adhesive bond for subsequent reactive resin layers.
- In the case of loaded areas, the fresh surface of **EC 633 C** can be scattered after 10 - 15 minutes. Consumption: approx. 2 - 3 kg/m² of quartz sand of the recommended grain sizes. **Important:** only use the recommended grain sizes.
- An epoxy resin primer can then be applied as required.
- Direct sealing with two layers of **EP 742** is possible. Consumption: approx. 0.18 - 0.25 kg/m² per sealing layer.

Substrate

The substrate to be coated must be non-slip, sufficiently resistant to tension and compression, clean as well as be free from weakly-bonded and sandy components or any impurities. Materials impairing adhesion such as grease, oil and paint residues should be removed with suitable measures. Substrates suitable for coating are concrete C25/30 or cement screed CT-C30-F5. The substrates must have a sufficiently high strength for the intended use. The substrates to be coated must be prepared mechanically, preferably by milling and shot-blasting or by grinding (diamond). The surface strength must then be at least 1.5 N/mm². Observe the information issued by the trade associations, e.g. the most recent versions of BEB worksheets KH-0/U and KH-0/S as well as the notes provided in the product information for the recommended KLB base coats.

As a result of rising air, pores in the substrate will lead to bubbles and, in turn, to pores in the respective subsequent coatings. It is therefore important that the primer is applied carefully and that it saturates the substrate. Under certain circumstances, extremely absorbent substrates may require an additional base layer (water drop test!). **EC 940 Grund** can be applied again after an intermediate drying

phase. Primers containing epoxy resins are recommended, especially in the case of substrates with an unspecified moisture load, and can be applied in one or two layers as required. Epoxy resin primers must always be scattered openly with quartz sand **Quarzsand 0.7/1.2 mm**. Consumption: approx. 1 - 2 kg/m².

Cracks in the substrate must be professionally closed in advance.

Any larger holes can be filled beforehand with **EC 633 C** by adding a maximum of 50% of quartz sand **Quarzsand 0.7/1.2 mm** (12,5 kg) to 25 kg (= 1 bag of **EC 633 C**). These must then be scattered with quartz sand **Quarzsand 0.1/0.3 mm** or **0.1/0.5 mm**.

Mixing

Add the correct quantity of water into the clean mixer or mixing vessel and pour in the powder until it is free of lumps. For mixing, in particular volumes for larger areas, a dissolver mixer, e.g. UEZ or similar, is recommended, in order to achieve an optimal blend. For small areas, we recommend mixing in a Hobbock with a powerful mixer at a minimum speed of 300 rpm.

When using a manual mixing device, mixing times of approx. 1 - 2 minutes are required to achieve a compound free of lumps. This is followed by a maturing time of approx. 2 - 3 minutes. This time can be used to prepare the next mixture. The matured mixture is mixed again briefly (approx. 1 minute) and then processed.

When using dissolver mixers, there is no need for another maturing time after a sufficient mixing time. The mixing time therefore depends on the mixing device used. Then keep all mixing times consistent.

Processing

Distribute the mortar mixture onto the area evenly without any delay and pull off with a pin screed scraper. Adjust the length of spikes according to the material before starting to work. Subsequently, after a short waiting period of about 3 - 5 minutes, vent with a spiked roller in crosswise motion (for higher layer thicknesses, use the spiked roller **Stachelwalze PU-BETON**) parallel to the installation strips. The method of working should be chosen so that the material is applied in strips. We recommend maximum track widths of 10 to 15 m, depending on the room geometry. As the processing times are short due to the system, adherence to the specified working rhythm is particularly important for the end result. Once the self-levelling mortar is fully cured as described above, it can be processed further.

Processing can also be done mechanically using pumps. In this regard, please have a look at our application recommendation and seek advice, if necessary.

The floor and room temperatures must not fall below 5 °C / 41 °F. Avoid strong sunlight and draughts during installation. Glass fronts should be shaded, especially in the case of intense sunlight, by covering them with suitable film.

If working conditions are not complied with, the technical properties of the end product may deviate from the description.

Cleaning

To remove fresh contamination and to clean tools, use water immediately. Hardened material can only be removed mechanically.

Storage

Store in a dry location. Bring to the correct processing temperature before handling. Only process complete packaging units!

Special remarks

This product is regulated by the German Ordinance on Hazardous Substances (GefStoffV), German Ordinance on Industrial Safety and Health (BetrSichV), and transport regulations for hazardous goods. The necessary information is contained in the DIN Safety Data Sheet. Observe all identification information on the product label! Empty bags must be disposed of via the REPASACK recycling system.

GISCODE: ZP1

CE marking

CE

KLB Kötztal Lacke + Beschichtungen GmbH
Günztalstraße 25
89335 Ichenhausen, GERMANY

21

EC633C-V1-102025

DIN EN 13813:2003-01

Synthetic resin screed mortar
DIN EN 13813: CT-C50-F7

Fire behaviour	$A2_{fl}$-s1
Emission of corrosive substances	CT
Compressive strength in N/mm²	C50
Flexural strength in N/mm²	F7

Please consider the latest version of this product information on our website.