

## Technical Data Sheet

33.06.661E – 11/06

### ® KERAKRET EP 234

**Synthetic resin coating for the protection of concrete, highly resistant to mechanical and chemical attacks, can be machine-finished**

#### Description

Kerakret EP 234 is a seamless synthetic resin coating based on resin with modified mineral fillers that is highly resistant to mechanical stress and designed for fast application. Depending on actual requirements, the applied thickness may range between 6 and 20 mm. A variety of coloured quartz mixtures can be utilised for applications involving decorative synthetic resin floor toppings.

Solvent free according **ibh** - recommendation

#### Typical uses

Kerakret EP 234 is the ideal coating system for floors that are subjected to extreme chemical and mechanical loads. The typical fields of application encompass process areas in the food and beverage industry including dairies and breweries. Furthermore, Kerakret EP 234 is used for warehouses and workshops as well as for loading and transshipment areas.

#### Properties

Kerakret EP 234 is a flooring system that is resistant to wear, fit for traffic and capable of withstanding extreme mechanical and chemical loads. The coating hardens without shrinking and may be applied without joints. A noteworthy feature of this flooring system is its suitability for alternating thermal exposures, e.g. in the discharge area of hot media. In foodstuff areas and in case of permanent wetness load an additional sealing is necessary. In addition to its natural colour formulation and the colours RAL 7032 (grey) and RAL 8009 (red), very aesthetically appealing floorings can be achieved by blending in various colour quartz mixtures.

- FDA-Approval (Institut Fresenius)

#### Chemical resistance

A noteworthy feature of this flooring system is its chemical resistance to polar and non-polar solvents as well as to inorganic and organic acids or bases, in particular:

Solvents	Resistance (42d)
Trichloroethylene	+
Methanol	+
Acetone	+
Ethyl acetate	+
Methylethyl ketone	+
Xylene	+
Toluene	+
Petrol 80/110	+
Lyes (Concentration)	Resistance (42d)
Ammonium hydroxide (< 35% NH <sub>3</sub> )	+
Caustic soda	+
Caustic potash	+
Acids (Concentration)	Resistance (42d)
Phosphoric acid (conc.)	+
Sulphuric acid (≤ 80%)	+
Chromic acid (≤ 20%)	+
Nitric acid (≤ 40%)	+

#### Substrate

Concrete structures must satisfy the requirements given in DIN EN 14879-1.

#### Surface pre treatment

If required, the concrete surface must be treated by means of blasting in such a way that it is free from cement slurries, cement skin, loose and brittle particles, defects and separating substances. The residual moisture of the concrete surface should be < 4%.

#### Application

Mixing ratios	Packing size (kg)	Parts by weight (kg)	Parts by volume (l)
<u>KCH EP Primer 12</u>			
component A	3.13 / 12.5	100	2.00
component B	1.87 / 7.5	60	1.30
<u>KERAKRET EP 234, colourless – natural quartz</u>			
<u>(Manually application)</u>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 2	4 x 15kg	800	

Mixing ratios	Packing size (kg)	Parts by weight (kg)	Parts by vol. (l)
<b>KERAKRET EP 234, colourless - colourquartz</b>			
<b><u>(Manually application)</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 4 colour	2 x 18kg	533	
Powder K 3 white	1 x 24kg	267	
<b>KERAKRET EP 234, RAL – natural quartz</b>			
<b><u>(Manually application)</u></b>			
Comp. A RAL	7.95	100	6.35
component B	1.35	17	1.40
Powder K 2	4 x 15kg	800	
<b>KERAKRET EP 234, colourless – natural quartz</b>			
<b><u>(Mechanically application – temperature aerea &lt; 22°C)</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 2	3 x 15kg	600	
<b>KERAKRET EP 234, colourless – natural quartz</b>			
<b><u>(Mechanically application – temperature aerea &gt; 22°C)</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 2	4 x 15kg	800	
<b>KERAKRET EP 234, colourless – colourquartz</b>			
<b><u>(Mechanically application – temperature aerea &lt; 22°C)</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 4 colour	1 x 27kg	360	
Powder K 3 white	1 x 18kg	240	
<b>KERAKRET EP 234, colourless – colourquartz</b>			
<b><u>(Mechanically application – temperature aerea &gt; 22°C)</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
Powder K 4 colour	2 x 18kg	533	
Powder K 3 white	1 x 24kg	267	
<b>KERAKRET EP 234, RAL – natural quartz</b>			
<b><u>(Mechanically application – temperature aerea &lt; 22°C)</u></b>			
component A	7.95	100	6.35
component B	1.35	17	1.40
Powder K 2	3 x 15kg	600	
<b>KERAKRET EP 234, RAL – natural quartz</b>			
<b><u>(Mechanically application – temperature aerea &gt; 22°C)</u></b>			
component A	7.95	100	6.35
component B	1.35	17	1.40
Powder K 2	4 x 15kg	800	

Mixing ratios	Packing size (kg)	Parts by weight (kg)	Parts by vol. (l)
<b><u>Sealing, colourless</u></b>			
component A	7.50	100	6.30
component B	1.35	18	1.40
<b><u>Sealing, RAL</u></b>			
component A	7.95	100	6.35
component B	1.35	17	1.40

KERAKRET EP 234 is composed of a two-component Primer and a three-component Top Coat, with the solution (component A) and the hardener (component B) being delivered in adjusted bins.

#### **Manually application:**

Spread the Primer on the substrate and broadcast a small amount of Powder K 2 over it. Apply the Top Coat compound to the hardened primer, level it by means of a browning rod and compress it. The thickness of the Top Coat should measure 6 mm at least.

#### **Mechanically application:**

Spread the primer onto the substrate using a roller and strew a small amount of Powder K 2 over it. Apply the body coat with a floorsliding-vehicle onto the hardened primer and compress / level it with a power trowel smoothing tool.

#### **Optional:**

For a very smooth surface spread one layer of sealing onto the hardened body coat.

#### **Pot life**

Temperature	Primer	Top Coat/Sealing
15°C	~ 60 min.	~ 25 min.
20°C	~ 45 min.	~ 20 min.
30°C	~ 20 min.	~ 10 min.

#### **Coverage**

Primer: approx. 0.4 kg/m<sup>2</sup>, 1.2 kg/m<sup>2</sup> Powder K 2  
 Top Coat: approx. 2.0 kg/m<sup>2</sup> per mm thickness  
 Sealing, single: approx. 0.4 kg/m<sup>2</sup>

#### **Packing**

The following standard quantities are available:

KCH EP primer 12 component A	3.13 / 12.5 kg
KCH EP primer 12 component B	1.87 / 7.5 kg
KERAKRET EP 234 comp. A, colourless	7.50 kg
KERAKRET EP 234 component B	1.35 kg
KERAKRET EP 234 comp. A, RAL	7.95 kg
Powder K 2	15 kg
Powder K 3 white	18 / 24 kg
Powder K 4 colour	18 / 27 kg

**Storage**

The products shall be stored in a cool and dry place ( $\geq 15^{\circ}\text{C}$ ). With a storage temperature of  $23^{\circ}\text{C}$  the minimum shelf life is as follows:

KCH EP primer 12 component A	12 months
KCH EP primer 12 component B	12 months
KERAKRET EP 234 comp. A colourless	12 months
KERAKRET EP 234 component B	12 months
KERAKRET EP 234 comp. A, RAL	12 months
Powder K 2	24 months
Powder K 3 (white)	24 months
Powder K 4 (colour)	24 months

Higher temperatures will shorten the shelf life of this products. Packaging drums are to be kept tightly shut and are to be resealed each time material has been removed. All liquid products must be stored frost-free.

**Safety**

Adequate ventilation is to be provided while work is in progress. Ventilation is compulsory for all work carried out in pits and closed rooms. All vapours that are produced while work is in progress must be continuously suctioned off at floor or bottom level.

Only the amount of material effectively required to continue work is to be stored at the working place. The instructions for the prevention of fire and explosion are to be observed if required. Please note and ensure that even the smallest quantities of the individual components and/or prepared mixtures are not allowed to reach the sewerage.

All regulations for the prevention of accidents stipulated by the employer's liability assurance association, the regulations for the prevention of accidents prescribed at the site of application and the TRGS 507 „Surface treatment in rooms and tanks“, as well as the safety precautions listed on the packing (label) required by the provisions of the Hazardous Materials Ordinance shall be adhered to. The operating instructions pursuant to § 14 GefStoffV as well as the EC safety data sheets are to be complied with.

Technical data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	$\text{g/cm}^3$	2.0
Compressive strength	DIN EN ISO 604	MPa	95
Flexural strength	DIN EN ISO 178	MPa	20
Modulus of elasticity (bending test)	DIN EN ISO 178	MPa	9,000
Adhesive strength to concrete/screed *)	DIN EN 24624	MPa	> inherent strength of substrate
Dissipation Resistivity (to earth)	DIN EN ISO 1081	$\Omega$	$> 10^9$
Coefficient of linear thermal expansion	DIN 53752	$\text{K}^{-1}$	$15 \cdot 10^{-6}$
Max. service temperature		$^{\circ}\text{C}$	100

\*) Compressive strength 25 MPa

The technical data contained herein represents the current state of our product knowledge and is intended to furnish general information regarding our products and their application spectrum. In view of the diversity and multitude of application possibilities, this data should be regarded solely as general information, which does not guarantee any specific properties and/or suitability of these products for each concrete case of application. Consequently, when ordering a product, please contact us for detailed information relative to the properties required for a specific application. Our technical service will, upon request, furnish a profile of characteristics for the concrete application without delay.

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شرکت کسری نماینده رسمی KCH آلمان