

Technical Data Sheet

33.06.429E – 07/06

® KERANOL WG 311

Silicate-based bedding and jointing mortar for masonry exposed to severe process conditions

Description

KERANOL WG 311 is a two-component, halogen-free bedding and jointing mortar based on potassium silicate (42.5 °Bé).

Typical uses

KERANOL WG 311 is recommended as a bedding and jointing material for masonry exposed to concentrated acids, for example concentrated sulfuric acid and/or high temperatures.

This material is predominantly used for masonry applications in the chemical process industry, e.g. installations for the production of sulfuric acid, chlorine drying towers and/or installations for the purification of waste gas.

Properties

KERANOL WG 311 exhibits very good resistance to concentrated acids, e.g. sulfuric acid, nitric acid or perchloric acid. A particularly outstanding feature is its high degree of thermal resistance up to temperatures of 900 °C.

Chemical resistance

Information on the chemical resistance properties will be provided on request.

Substrate

Steel or sealing layers on steel and acid-proof ceramic material may serve as substrate.

Surface pretreatment

The surface of the substrate shall be free from separating substances and impurities.

Application

KERANOL WG 311 consists of a two-component mortar compound.

Mixing ratios	Parts by weight (kg)	Parts by volume (l)
KCH WG solution 2	100	2.00
KCH WG powder 2	300	5.40

Pot life

Temperature	KERANOL WG 311
15°C	~ 65 minutes
20°C	~ 50 minutes
30°C	~ 20 minutes

Coverage

bedding and jointing (bed joint 5mm / cross joint 7mm):

Split tiles 240 x 115 x 20	approx. 14 kg/m ²
Split tiles 240 x 115 x 40	approx. 18 kg/m ²
Bricks 240 x 115 x 65	approx. 22 kg/m ²
Bricks 240 x 115 x 80	approx. 24 kg/m ²

Packing

The following standard quantities are available:

KCH WG solution 2	20 kg
KCH WG powder 2	25 kg

Storage

The products shall be stored in a cool and dry place. With a storage temperature of 23°C the minimum shelf life is as follows:

KCH WG solution 2	12 months
KCH WG powder 2	24 months

Higher temperatures will shorten the shelf life of this products. The 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	g/cm ³	1.9
Compressive strength	DIN EN ISO 604	MPa	40
E-Module (compression)	DIN EN ISO 604	MPa	9,300
Adhesive strength to bricks	DIN EN 24624	MPa	> 1
Coefficient of linear thermal expansion	DIN 53752	K ⁻¹	15 · 10 ⁻⁶
Max. operating temperature		°C	900 (dry)

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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تلفن: ۰۴-۲۲۶۴۶۷۸۳ و ۰۱۰-۲۲۶۳۰۶۰۸

شرکت کسری نماینده رسمی KCH آلمان