

Technical Data Sheet

33.07.101E – 02/07

® KERABUTYL BS

Soft rubber lining to protect steel components, sealing sheet to protect concrete components

General construction regulation approval no. Z-59.21-64

On-site rubber lining

Description

KERABUTYL BS is a pre-vulcanized soft rubber lining based on chlorobutyl rubber (CIIR). The layer thickness may range between 2 and 5 mm depending on the requirement.

Typical uses

KERABUTYL BS is used to protect steel and concrete components from chemical attack.

KERABUTYL BS linings are predominantly applied in absorbers, ducts, storage and feeding tanks of flue gas desulfurization plants and other flue gas purification plants. Positive experience has been gathered with KERABUTYL BS for more than 100,000 operating hours. KERABUTYL BS is further used as sealing sheet in pits, collecting pits and collecting rooms and as sealing layer under ceramic tiling.

KERABUTYL BS has been awarded an approval certificate by the DIBt (German Institute for Construction Engineering) according to the principles of construction and testing for being a suitable sealing sheet for concrete and screed substrates.

Properties

In addition to its resistance to a wide range of chemicals KERABUTYL BS avails of good mechanical properties.

KERABUTYL BS further avails of the advantages pre-vulcanised rubber sheets offer, like problem-free storage and transportation without cooling for at least 24 months. KERABUTYL BS can be exposed to stress immediately after application without extensive vulcanisation measures being required.

Chemical resistance

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

Substrate

Steel and concrete components may serve as substrate.

The steel structures and concrete components to be rubber lined shall comply with the requirements of DIN EN 14879-1.

Surface pretreatment

Steel: The steel surface must be blasted to a metallic white finish. A preparation degree of Sa 2 ½ as specified in DIN EN ISO 12944-4 and a roughness degree of "medium (G)" as specified in DIN EN ISO 8503-1 must be achieved; minimum roughness Rz = 50 µm (Segment 2). After blasting, the steel surface must be primed.

Concrete: If required the concrete substrate 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 shall be < 4%.

Concrete substrates are provided with a conductive smoothing coat (thickness approx. 1 mm) of KERAPOX EP 221 to level unevenness' and to serve as counter pole for electrical tightness testing.

Application

KERABUTYL BS is bonded to the substrate using the adhesive BS systems. For priming Keratex primer is used.

Mixing ratios	Parts by weight (kg)	Parts by volume (l)
<u>Adhesive BS</u>		
Solution BS	100	2.00
Accelerator BS	9	0.12
Keratex hardener E	3.4	0.06

Spread the primer on the steel or concrete substrate (KERAPOX EP 221), then apply two layers of adhesive. Treat the rubber sheet with KCH cleaner 1 and brush it twice with adhesive.

The rubber sheets are firmly bonded to the substrate by rolling as specified in DIN 28055-1.

Pot life

Temperature	Adhesive BS
15°C	approx. 160 min
20°C	approx. 120 min
30°C	approx. 55 min

Keratex hardener E

12 months

KCH cleaner 1

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.

ConsumptionKeratex primer: approx. 0.15 kg/m²Adhesive BS: approx. 0.2 kg/m² per applicationKCH cleaner 1: approx. 0.2 kg/m²**Safety**

Adequate ventilation shall be provided during the execution of all work. Ventilation is compulsory for all work carried out in pits and closed rooms. All vapours that are produced during processing must be continuously suctioned off at floor or bottom level.

Only such 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 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.

Packing

The following standard quantities are available:

Keratex primer 5, 16 kg

Solution BS 5, 15 kg

Accelerator BS 5, 25 kg

Keratex hardener E 0.75 kg

KCH cleaner 1 8.5 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:

KERABUTYL BS sheet 24 months

Keratex primer 12 months

Solution BS 12 months

Accelerator BS 12 months

Technical data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	g/cm ³	1.28 ± 0.02
Shore hardness	DIN 53505	Shore A	53 ± 5
Tensile strength *	DIN 53504	MPa	≥ 2
Elongation at tear *	DIN 53504	%	≥ 400
Peeling strength	DIN 28055-2	N/mm	≥ 3
Max. surface pressure		MPa	1
Max. operating temperature		°C	90

*) : The values were determined at 4 mm thick rubber samples.

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