

Technical Data Sheet

33.07.109E – 02/07

® KERABUTYL BB-S

Soft rubber lining to protect steel components with general construction regulation approval no. Z-59.22-134
On-site rubber lining

Description

KERABUTYL BB-S is a self-vulcanizing soft rubber lining based on bromobutyl rubber (BIIR). The layer thickness of the rubber sheet may range between 3 and 6 mm depending on the requirement.

Typical uses

KERABUTYL BB-S is used to protect steel components from chemical attack.

This rubber lining is predominantly applied to absorbers, ducts, storage and supply tanks in flue gas desulfurization plants as well as to tanks of the chemical industry.

KERABUTYL BB-S is further used in installations producing phosphoric acid.

Special emphasis is to be laid on its suitability in case of vacuum stress.

Properties

KERABUTYL BB-S stands out for its excellent chemical resistance and a high resistance to diffusion, especially to steam.

KERABUTYL BB-S further avails of all the advantages non-vulcanized rubber sheets offer such as problem-free application on difficult tank geometry and high adhesion strength to the steel substrate.

KERABUTYL BB-S is bonded to the substrate using an elastomeric adhesive based on butyl rubber. Even in case of high operating temperatures excellent adhesion values are achieved permitting the rubber sheet to be used without any difficulties even in case of vacuum stress.

Chemical resistance

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

Substrate

Steel serves as substrate. The steel structures shall satisfy the requirements of DIN EN 14879-1.

Surface pretreatment

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 $R_z = 50 \mu\text{m}$ (Segment 2). After blasting, the steel surface must be primed.

Application

The KERABUTYL BB-S rubber lining consists of the single-component Primer 1, the single-component Primer 2, the two-component adhesive 1510 and the KERABUTYL BB-S sheet.

Mixing ratios	Parts by weight (kg)	Parts by volume (l)
adhesive 1510		
adhesive 1510	100	2.00
accelerator 1510	5	0.10

Spread the Primer 1 on the steel substrate, then apply one layer of Primer 2 and two layers of adhesive 1510. Spread the adhesive 1510 on the rubber sheet. The rubber sheets are firmly bonded to the substrate by pressing with heated pistons as specified in DIN 28055-1.

Pot life

Temperature	adhesive 1510
15 °C	~ 240 min
20 °C	~ 180min
30 °C	~ 80 min

Consumption

Primer 1: approx. 0.15 kg/m²
 Primer 2: approx. 0.20 kg/m²
 Adhesive 1510: approx. 0.2 kg/m² per coat

Packing

The following standard quantities are available:

Primer 1 23 kg
 Primer 2 25 kg
 Adhesive 1510 16 kg
 Accelerator 1510 0.8 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 BB-S sheet	2 months
KERABUTYL BB-S sheet < 15°C	8 months
Primer 1	12 months
Primer 2	6 months
Adhesive 1510	6 months
Accelerator 1510	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.

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.

Technical data	Test specification	Unit	Parameter
Density	DIN EN ISO 1183-1	g/cm ³	1.25 ± 0.02
Hardness	DIN 53505	Shore A	60 ± 5
Tensile strength*)	DIN 53504	MPa	> 5
Elongation at tear*)	DIN 53504	%	≥ 300
Peeling strength	DIN 28055-2	N/mm	≥ 4
Max. surface pressure		MPa	2
Max. operating temperature		°C	110

*) : The values were determined at 4 mm thick vulcanised 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