

## PRODUCT INFORMATION

### CHEMONIT 3 B (NR)

#### General properties

**CHEMONIT 3 B** is a brown hard rubber material on the basis of natural rubber, which must be vulcanised in the autoclave by hot air or alternative with steam. The essential properties of the hard rubber material **CHEMONIT 3 B** are its strong resistance against mineral acids, bases, aqueous phases, and especially its excellent resistance to wet chlorine and organic chemicals.

The above mentioned lining material can be used from - 10 °C to + 100 °C.

#### General Approval of German Institute for Construction Technology (DIBt)

The lining material **CHEMONIT 3 B** is approved by the German Institute for Construction Technology (DIBt) as an organic surface protection for storage tanks that are subject to the German water resources law (WHG 19 I)

CERTIFICATE-No.: Z-59.22-167

#### Fields of application

Due to its resistance to numerous inorganic and organic chemicals, the lining material **CHEMONIT 3 B** is worldwide used in the chemical, chlorine and steel industry, in mineral processing installations, electroplating as well as in the field of environmental protection. Here structural steel parts subject to high chemical, mechanical and thermal stress, such as storage bins, filter cells, mixing tanks, crystallisers, centrifuges and pipe spools can be protected from corrosion by the **CHEMONIT 3 B** lining material.

**CHEMONIT 3 B** is used especially as corrosion protection lining in Chlorine-Alkaline-Electrolysis applications for the inlet and outlet boxes, covers and cells.

#### Shelf life

**CHEMONIT 3 B** lining material can be stored without any loss of quality for a period of up to 3 month at a maximum temperature of + 25 °C.

Under cool storage conditions (at a temperature of + 5 °C) the material can be stored for a period of 12 months.

The conditions specified within DIN standard 7716 must be observed.

### Application on steel

**CHEMONIT 3 B** has to be bonded on steel with the **ADHESIVE SOLUTION SH-3A**.

If **CHEMONIT 3 B** is vulcanised with steam and for special applications the 2 layer priming system **PRIMER HG 1** and **PRIMER HG 2** has to be used in combination with the **ADHESIVE SOLUTION SH-3A**. The **PARA ADHESIVE SOLUTION** can be used for the **CHEMONIT 18** rubber sheet.

The standards EN 14879-1, EN 14879-4 and EN ISO 12944-4 have to be observed.

### Vulcanisation

**CHEMONIT 3 B** is vulcanised with hot air or steam in the autoclave at a temperature of approx. + 140 °C at a pressure of 4 bars. The necessary vulcanising time depends on the wall thickness of the steel parts as well of the rubber lining. As standard value, including the heating-up and cooling-down time, approx. 8 – 10 hours can be taken.

### Spark test

The spark test (Holiday Test) is carried out according to EN 14789-4. An earthed high-voltage spark tester Elmed-Isotest II RT or alternatively the Wegener Spark Tester WEG 20/22 must be used.

The test voltage has to be set as follows:

Lining material	Test voltage
<b>CHEMONIT 3 B</b> un-vulcanised	5 KV/mm (max. 20 KV)
<b>CHEMONIT 3 B</b> vulcanised	5 KV/mm (max. 20 KV)

## Mechanical - Physical Characteristics

Properties	Unit	Standard	Value
Polymer		ISO 1629	NR
Density raw material	[g/cm <sup>3</sup> ]	Elatest	1.10 ± 0.02
Density of cured material	[g/cm <sup>3</sup> ]	EN ISO 1183-1 ASTM D 297	1.15 ± 0.02
Hardness	[Shore D]	DIN 53505 ASTM D 2240	75 + 5 <sup>1)2)</sup>
Tensile strength determined on:	[MPa] S1	EN ISO 527 ASTM D 638	≥ 50 <sup>1)</sup> ≥ 40 <sup>1)</sup>
Elongation at break determined on:	[%] S1	EN ISO 527 ASTM D 638	≥ 5 <sup>1)</sup> ≥ 5 <sup>1)</sup>
Youngs modules	[MPa]	EN ISO 527 ASTM D 638	≥ 2000 <sup>1)</sup>
Bending strength	[MPa]	EN ISO 178 ASTM D 790	≥ 70 <sup>1)</sup>
Bonding strength to steel	[MPa]	EN ISO 4624 ASTM D 429	≥ 6
Volume resistivity	[Ω . cm]	DIN IEC 60093	10 <sup>15</sup>
Linear coefficient of expansion	[K <sup>-1</sup> ]	DIN 53752	100 x 10 <sup>-6</sup>
Test voltage	[KV/mm]	EN 14879-4	5
Operating temperature	[C°]		≤ 100

1) Press vulcanisation (2 h / + 145 °C)

2) Vulcanised in autoclave [on un-ground substrates]

The information given above is based on approved test results and represents statistical product data, which however does not necessarily guarantee the specific properties of the product.

We reserve the right to changes to technical specifications without prior notice, provided these ensure technical improvement without major modifications to the product itself.

## Basic Program **CHEMONIT 3 B**

### Availability and dimensions

Rubber sheets with PE separating sheets on hard core freely suspended in cardboard boxes.

Length [mm]	Width [mm]	Thickness [mm]	Quantity [m <sup>2</sup> ]	Product-No.
10.000	1.100	2	11	529 3520
10.000	1.100	3	11	529 3568
10.000	1.100	4	11	529 3609
10.000	1.100	5	11	529 3647
10.000	1.100	6	11	529 3685

This data sheet is for informational purposes only. All data provided herein is based on in-depth research and testing, however no liability whatsoever can be assumed. Since we are constantly endeavouring to up-date and improve our products, we recommend noting the index and issue date indicated on this data sheet and to inquire as to whether any properties have changed in the interim. This Product Information Sheet replaces all prior issues. Please contact our Technical Consultant for detailed information in case of ambiguities.

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