

PRODUCT INFORMATION

CHEMONIT 33 (NR)

General properties

CHEMONIT 33 is a charcoal-grey rubber material on the basis of natural rubber with graphite filler, which must be vulcanised in the autoclave by hot air or alternative in steam.

The essential properties of the hard rubber material **CHEMONIT 33** are its strong resistance against mineral acids, bases, hydrous phases, organic chemicals and especially its excellent resistance against wet chlorines and hydrochloric acid.

The above mentioned lining material can be used from - 20 °C to + 100 °C.

General Approval of German Institute for Construction Technology (DIBt)

The lining material **CHEMONIT 33** 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)

CERTIFICATE-No.: Z-59.22-312

Fields of application

Due to its resistance to numerous inorganic and organic chemicals, the lining material **CHEMONIT 33** is used as surface protection in the chemical, chlorine and steel industry, in electroplating installations 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 33** lining material.

Shelf life

CHEMONIT 33 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) **CHEMONIT 33** can be stored for a period of 12 months.

The conditions specified within DIN standard 7716 must be observed.

Application on steel

If the Vulcanisation occurs with hot air, **CHEMONIT 33** has to be bonded on steel with the **ADHESIVE SOLUTION SH3A**.

If **CHEMONIT 33** is vulcanised with steam the 2 layer priming system **PRIMER HG 1** and **PRIMER HG 2** have to be used in combination with the **ADHESIVE SOLUTION SH-3A**. The **PARA ADHESIVE SOLUTION** can be used for **CHEMONIT 33** rubber sheets.

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

For lining the surface of flanges on site, pre-vulcanised **CHEMONIT 33** sheets (dimension 1.000 x 1.000mm / thickness: 4 - 6 mm) will be used. These hard rubber sheets will be cut on side and applied with **CHEMONIT REPAIR CEMENT A+B**.

Vulcanisation

CHEMONIT 33 is vulcanised 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.

Vulcanisation will be done by means of hot air or steam alternatively.

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
CHEMONIT 33 un-vulcanised	3 KV/mm (max. 15 KV)
CHEMONIT 33 vulcanised	3 KV/mm (max. 15 KV)

Mechanical - Physical Characteristics

Properties	Unit	Standard	Value
Polymer		ISO 1629	NR
Density raw material	[g/cm ³]	Elatest	1.20 ± 0.02
Density of cured material	[g/cm ³]	EN ISO 1183-1 ASTM D 297	1.28 ± 0.02
Hardness	[Shore D]	DIN 53505 ASTM D 2240	80 ± 5 ¹⁾ 78 ± 7 ²⁾
Tensile strength determined on:	[MPa] S1	EN ISO 527 ASTM D 638	≥ 45 ¹⁾
Elongation at break determined on:	[%] S1	EN ISO 527 ASTM D 638	≥ 1 ¹⁾
Bending strength	[MPa]	EN ISO 178	≥ 70 ¹⁾
Bonding strength to steel	[MPa]	EN ISO 4624 ASTM D 429	≥ 6
Test voltage	[KV/mm]	EN 14879-4	3
Operation temperature	[C°]		≤ 100

1) Press vulcanisation (2^h / 145 °C)

2) Vulcanised in autoclave

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 33**

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.]	Product-No.
10.000	1.100	2	11	510 5 29
10.000	1.100	3	11	511 5 29
10.000	1.100	4	11	512 5 29
10.000	1.100	5	11	513 5 29
10.000	1.100	6	11	514 5 29

CHEMONIT 33 is available as vulcanised sheets for site application of flanges.

Dimension: 1000 mm x 1000 mm thickness from 4 to 6.

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 would recommend to note 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.