

PRODUCT INFORMATION

CHEMOLINE 4 A (BIIR)

General Properties

CHEMOLINE 4 A is a black soft rubber material on the basis of bromobutyl rubber (BIIR) that can be vulcanised in the workshop by means of hot air or steam in the auto-clave alternatively.

The essential properties of **CHEMOLINE 4 A** are its strong resistance to mineral acids, bases, polar solvents, aqueous phases, and especially its excellent diffusion resistance to gases like sulphur dioxide, nitrogen oxide and saturated water vapour.

Above mentioned lining material can be used within temperatures of – 40 °C up to + 100 °C.

General Approval of German Institute for Construction Technology (DIBt)

The lining material **CHEMOLINE 4 A** 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-59.22-162

Fields of Application

Due to its resistance to numerous chemicals **CHEMOLINE 4 A** is worldwide used in the chemical, chlorine and steel industry, in mineral processing 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, crystallizers, condensers and FGD plants can be protected from corrosion by using the **CHEMOLINE 4 A** lining material

Shelf Life

CHEMOLINE 4 A lining material can be stored without any loss of quality for a period of up to 6 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 standard DIN 7716 must be observed.

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Application on Steel

CHEMOLINE 4 A is bonded on steel by means of TIP TOP two-coat primer system **PRIMER PR 500-1 / PRIMER S 500-2** in combination with **CEMENT TC 5000**.

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

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
CHEMOLINE 4 A un-vulcanised	4 KV / mm (max. 20 KV)
CHEMOLINE 4 A vulcanised	4 KV / mm (max. 20 KV)

Mechanical - Physical Characteristics

Properties	Units	Standard	Value
Polymer		ISO 1629	BIIR
Tensile strength determined on:	[MPa] S2 Bar	DIN 53504	≥ 5 ¹⁾
Elongation at break determined on:	[%] S2 Bar	DIN 53504	≥ 370 ¹⁾
Hardness	[Shore A]	DIN 53505	50 ± 5 ¹⁾ 50 ± 5 ²⁾
Rebound resilience	[%]	DIN 53512	≥ 6
Abrasion	[mm ³]	ISO 4649	≤ 320
Density	[g / cm ³]	EN ISO 1183-1	1.27 ± 0.02
Bonding strength on steel	[N/mm]	ISO 813	≥ 4
Surface resistivity	[Ω]	DIN IEC 60093	$\geq 10^{12}$
Test voltage	[KV/mm]	EN 14879-4	4
Operating temperature	[° C]		≤ 100
Thermal conductivity	[W / mK]	DIN 51046	0.33
Water vapour permeability (Thickness of sheet 4 mm)	[g / m ² · d]	DIN 53122	0.04

¹⁾ Vulcanisation in the autoclave

²⁾ Press vulcanisation

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

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

Basic Program **CHEMOLINE 4 A**

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	272 3 28
10.000	1.100	3	11	276 6 28
10.000	1.100	4	11	280 0 28
10.000	1.100	5	11	284 4 28
10.000	1.100	6	11	288 8 28

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.