

PRODUCT INFORMATION

CHEMOLINE 12 CN (CIIR)

General properties

CHEMOLINE 12 CN is a black soft rubber material on the basis of chlorobutyl rubber (CIIR), equipped with a bonding layer, which is reactive and easy to bond. This lining material is bonded onto steel, concrete and many other substrates by means of special TIP TOP contact adhesives, according to the cold bonding system.

As the vulcanisation (intramolecular cross-linkage) has already been carried out during manufacturing, neither subsequent thermal treatment nor longer waiting times until complete vulcanisation are required after completion of the lining operation – the lining material can be put under chemical, mechanical and thermal stress immediately after the lining is completed.

A further excellent property is the resistance to diffusion of gases such as sulphur dioxide, nitric oxides and saturated water vapour.

CHEMOLINE 12 CN can be used from – 40 °C to + 70 °C. Other conditions should be checked upon request.

Approvals: KTW, KSW, DVWG

CHEMOLINE 12 CN is to be used especially where lining grades with drinking water approvals are required such as in water treatment plants and for Swimming and Bathing Pools,

CHEMOLINE 12 has drinking water approvals from the following authorities:

- German KTW - Drinking Water Approval Category B up to 60 °C
- **CHEMOLINE 12** conforms to the requirements of the stipulations of the DVGW-Worksheet W 270
- KSW – Swimming & Bathing Water Approval
- BS 6920 – Tests Approval on the Effect of Water Quality → WRAS-conforms to the requirements of Water Regulations Advisory Scheme
- Conforms to the Regulations of CFR 21 § 177.2600 the Food and Drug Administration (FDA) for liquid foods

Fields of application

Due to its resistance to numerous chemicals **CHEMOLINE 12 CN** is worldwide used as corrosion protection in the chemical industry and especially in water treatment plant. Here, structural steel parts subject to high chemical, mechanical and thermal stress, such as storage bins, filter cells, mixing tanks and flow meters can be protected from corrosion by using the **CHEMOLINE 12 CN** lining material.

Application on steel

CHEMOLINE 12 CN is bonded onto steel by using the CFC-free adhesive system **METAL PRIMER PR 304** in combination with **CEMENT BC 3004**. Alternatively the adhesive system **METAL PRIMER PR 300 / CEMENT BC 3000** can be used.

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

Shelf life

CHEMOLINE 12 CN material can be stored without any loss of quality for a period of min. 24 months at a maximum temperature of + 25 °C, subject to re-inspection thereafter. The DIN 7716 standard has to be observed.

Spark Test

The spark test (Holiday Test) is carried out according to the EN 14879-4. An earthed high-voltage spark tester Elmed-Isotest II RT or alternatively the Wegener AC Spark Tester WEG 20/22 must be used.

The test voltage has to be set as follows:

Lining material	Test voltage
CHEMOLINE 12 CN vulcanised	4 KV/mm (max. 16 KV)

Mechanical - Physical Characteristics

Properties	Units	Standard	Value
Polymer		ISO 1629	CIIR
Tensile strength determined using:	[MPa] S2 bar	DIN 53504	≥ 7 ¹⁾ ≥ 6 ²⁾
Elongation at break determined using:	[%] S2 bar	DIN 53504	≥ 550 ¹⁾ ≥ 450 ²⁾
Hardness	[Shore A]	DIN 53505	50 ± 5 ^{1) 2)}
Density	[g / cm ³]	EN ISO 1183-1	$1,24 \pm 0,02$
Rebound resilience	[%]	DIN 53512	≥ 8
Abrasion	[mm ³]	ISO 4649	≤ 300
Modulus of elasticity (Young's)	[N/mm]	DIN 53507	≥ 8
Bonding strength to steel	[N/mm]	ISO 813	≥ 4
Test voltage	[KV/mm]	EN 14879-4	4
Surface resistivity	[Ω]	DIN IEC 60093	10^{11}
Volume resistivity	[$\Omega \times \text{cm}$]	DIN IEC 60093	10^{11}
Operating temperature	[°C]		≤ 70

1) Vulcanisation in the press

2) tested 4 mm Chemoline 12CN

The information given above is based on single measurements resulting in the standard values, which identify the product without necessarily guaranteeing 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 **CHEMOLINE 12 CN**

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 ²]	Product No.
10.000	1.100	2	11	528 2370
10.000	1.100	3	11	528 2300
10.000	1.100	4	11	528 2310
10.000	1.100	5	11	528 2320
10.000	1.100	6	11	528 2330

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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