

## PRODUCT INFORMATION

### CHEMOLINE 70

#### PRODUCT DESCRIPTION

**CHEMOLINE 70** is a black soft rubber lining based on Chlorobutyl rubber and Polyvinyl Chloride (ClIR / PVC).

**CHEMOLINE 70** shows excellent resistance against concentrated hydrochloric acid.

#### FIELDS OF APPLICATION

**CHEMOLINE 70** is used mainly for workshop rubber linings of metallic components of storage vessels, road tankers, railroad tankers or containers for concentrated hydrochloric acid up to +60°C. Further examples to the applications include the lining of acid pickling lines (pickling baths) and electroplating baths.

#### FEATURES

- Very good resistance against mineral acids, bases and especially against concentrated hydrochloric acid  $\leq 37\%$  up to +60°C
- Application onto metallic components
- Workshop rubber lining

#### CHEMICAL RESISTANCE

Information on the chemical resistance properties is available upon request.

#### SUBSTRATE

Substrates are components made of non-ferrous metals, cast iron, non-alloyed or austenitic steel. Components to be rubber lined shall be designed and manufactured in accordance with EN 14879-1.

#### SURFACE PRE-TREATMENT

All surfaces to be rubber lined must be dry and free of contaminants. All contaminants, including non-visible detectable contaminants, must be removed in accordance with DIN TR 55684 or EN ISO 8502.

Non-alloyed steel surfaces shall be abrasive blasted to "Near White Metal" in accordance with EN ISO 12944-4. A surface preparation degree of SA 2½ (SSPC-SP 10; NACE No. 2) as specified in EN ISO 8501-1 and a "medium (G)" roughness degree as specified in EN ISO 8503-2 must be achieved. A minimum surface profile of  $R_z \geq 50 \mu\text{m}$  is required.

To prevent flash rust, the primer must be applied immediately after the blasting and cleaning of the substrate or the component must be air conditioned to a relative humidity of  $\leq 40\%$ .

#### ENVIRONMENTAL CONDITIONS

Throughout the rubber lining process, the temperatures of the substrate and rubber lining materials shall be maintained within the range specified by TIP TOP. All surfaces shall be maintained at a temperature at least 3K above the dew point in order to prevent condensation.

#### ADHESIVE SYSTEM

**CHEMOLINE 70** is bonded onto steel components by using the two-coat primer system **PRIMER PR 500-1 & PRIMER S 500-2** in combination with **ADHESIVE TC 5000**.

#### APPLICATION METHOD AND CONSUMPTION

During the application of the product, the application instruction must always be observed.

Coat	Product	Application Method	Coverage [g/m <sup>2</sup> ]
1. Coat steel	<b>PRIMER PR 500-1</b>	Roll / Spray	ca. 150
2. Coat steel	<b>PRIMER S 500-2</b>	Brush	ca. 125
3. Coat steel	<b>ADHESIVE TC 5000</b>	Roll	ca. 150
4. Coat steel	<b>ADHESIVE TC 5000</b>	Brush	ca. 150
1. Coat rubber	<b>ADHESIVE TC 5000</b>	Brush	ca. 150

#### CLEANING

Clean all equipment with **SOLVENT CF-CE** immediately after use.

#### VULCANISATION

Place	Vulcanisation Method
Workshop	Vulcanisation in an autoclave under pressure by means of hot air or steam.

#### SPARK TEST

The spark test (holiday test) of new rubber linings is carried out according EN 14879-4 by using a high voltage tester. For carrying out the spark test, only the high voltage testers of Elmed model Isotest IIRT, Isotest 3P or Isotest Inspect 35 as well as the test pistols of Wegener model WEG 20, WEG 22 or WEG 100 are allowed.

CHEMOLINE 70	Test Voltage [kV/mm]	Max. Test Voltage [kV]
unvulcanised	4.0	20.0
vulcanised	4.0	20.0

#### SAFETY MEASURES

The material safety data sheets of the individual components, the safety instructions on the packing (label) as well as the legal requirements for handling hazardous materials must be observed.

## CHEMOLINE 70

### PACKING UNITS

The products are supplied in the following standard package sizes:

Product	Size	Article No.
ADHESIVE TC 5000	9 kg	525 2286
ADHESIVE TC 5000	25 kg	525 2224
PRIMER PR 500-1	0.75 kg	525 2303
PRIMER PR 500-1	4.5 kg	525 2470
PRIMER PR 500-1	9 kg	525 2327
PRIMER PR 500-1	25 kg	525 2334
PRIMER S 500-2	0.75 kg	525 2310
PRIMER S 500-2	9 kg	525 2341
PRIMER S 500-2	25 kg	525 2358
SOLVENT CF-CE	10 l	595 9163

### PACKAGING OF RUBBER SHEETS

The rubber sheets are wrapped with PE-separating sheets on cardboard cores, and packed freely suspended in stable, stackable card boxes, to avoid pressure points.

**CHEMOLINE 70** is manufactured by extrusion in the following standard sizes:

Size (Tolerances according EN 14879-4)	Article No.
2 mm x 1100 mm x 10000 mm	528 4050
3 mm x 1100 mm x 10000 mm	528 4060

Size (Tolerances according EN 14879-4)	Article No.
2 mm x 1100 mm x 10000 mm	528 4050
4 mm x 1100 mm x 10000 mm	528 4070
5 mm x 1100 mm x 10000 mm	528 4080
6 mm x 1100 mm x 10000 mm	528 4090

### STORAGE

The products must be stored in a cool and dry place, away from direct sunlight. The rubber sheets must be stored free of pressure, best in the original packaging. The rubber sheets may not receive any pressure points. At the specified storage temperatures a shelf life of the products is given of at least for the following periods:

Product	Temperature	Shelf Life
ADHESIVE TC 5000	5 - 20°C	12 Months
CHEMOLINE 70	≤ +25°C	3 Months
CHEMOLINE 70	≤ +5°C	6 Months
PRIMER PR 500-1	5 - 25°C	12 Months
PRIMER S 500-2	5 - 25°C	12 Months
SOLVENT CF-CE	5 - 25°C	60 Months

If the storage time is exceeded, the materials must be tested before use. Higher storage and transport temperatures will reduce the shelf life. The containers must be kept tightly closed. Liquid products must be stored frost-proof. In addition, the DIN 7716 must be observed.

Technical Data	Standard	Unit	Value
Polymer Base	ISO 1629 (ASTM D1418)	-	CIIR / PVC
Density	EN ISO 1183-1 (ASTM D792)	g/cm <sup>3</sup>	1.18 ± 0.02
Contact Resistance	EN 62631-3-1	Ω · cm	1.5 x 10 <sup>11</sup>
Hardness - Shore A	ISO 48-4 (ASTM D2240)	-	60 ± 5*
Max. Surface Pressure	-	N/mm <sup>2</sup>	2
Surface Resistance	EN 62631-3-1	Ω	3.5 x 10 <sup>11</sup>
Elongation at Break	DIN 53504 (ASTM D412)	%	≥ 400**
Tensile Strength	DIN 53504 (ASTM D412)	N/mm <sup>2</sup>	≥ 4**
Peel Strength to Steel	ISO 813 (ASTM D429)	N/mm	≥ 4
Temperature Range	-	°C	-30 up to +80

\* Autoclave vulcanisation \*\* S2 dump-bell test piece after press vulcanization

**Note:** The indicated temperatures are dependent on the present load and may vary

Information given in the fact sheet above corresponds to the current knowledge available to us regarding our products at the time of its drafting and is intended as a guideline for informational purposes. However, because of the multiple possibilities regarding possible applications, processing and on site conditions, any information given in the fact sheet above is not legally binding, in particular, without being limited to, such information shall not be interpreted as a warranty of merchantability or of fitness for a particular purpose. Customer therefore is advised to conduct its own testing or make an inquiry with our technical department before ordering. We reserve the right to change the product at any time, in particular, without being limited to, minor changes because of advancements in technology. If by way of exception, the information given in the fact sheet above is incorporated by reference into any contract concluded with us under German Law, such information, shall only be interpreted as determining the specific requirements of the contractual products as set out in § 434 BGB (German Civil Code) and shall not be interpreted as constituting a guarantee of condition.

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