



// ONE BRAND // ONE SOURCE // ONE SYSTEM



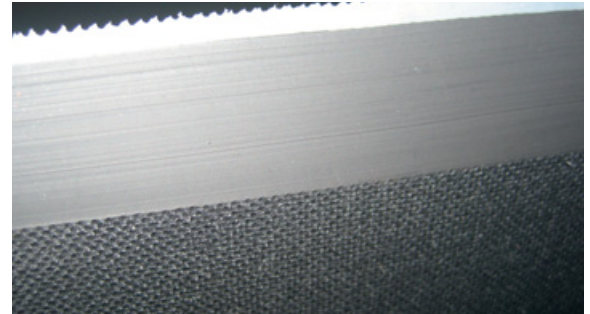
CORROSION PROTECTION - Rubber Lining Systems
REMA TIP TOP/North America, Inc.

RUBBER LINING MATERIALS

In the **REMA TIP TOP** Surface Protection segment, soft rubber linings are utilized under the brand name **CHEMOLINE** and hard rubber linings under the brand name **CHEMONIT**. Our rubber sheets are produced on an ultra-modern roller head system with an integrated vacuum extruder. This is the only way in which pore-free and absolutely homogeneous rubber sheets can be produced that guarantee long operating times.

REMA TIP TOP offers the following types of rubber:

- Bromobutyl rubber (BIIR)
- Chlorobutyl rubber (CIIR)
- Chloroprene rubber (CR)
- Natural rubber (NR)
- Hypalon (CSM)
- Isoprene rubber/Styrol-butadiene rubber (IR/SBR)
- Bromobutyl/Polyvinylchloride (BIIR/PVC)
- Chlorobutyl rubber/Chloroprene rubber (CIIR/CR)



Section through a homogeneous pore-free REMA TIP TOP rubber lining

WORKSHOP RUBBER LINING

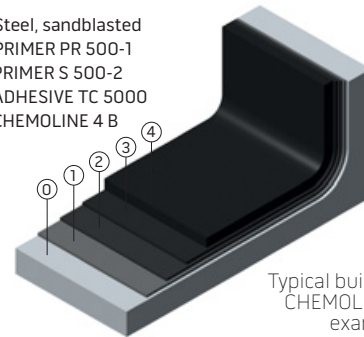
For components that fit into an autoclave and can be transported, such as pipes, flue gas scrubbers, quench towers, venturi scrubbers, filter and storage tanks, reaction and pickling tanks, centrifuges, road- and railway tanks, valves as well as rollers and drums, REMA TIP TOP workshop rubber linings offer optimal protection.

CHEMOLINE soft rubber lining – unvulcanized or self-vulcanizing:

Unvulcanized **CHEMOLINE** soft rubber lining products are normally vulcanized in an autoclave. However these can also be vulcanized on the construction site with steam or hot water. Specially developed rubber lining materials and adhesives can be used up to an operating temperature of 120 °C after vulcanization.

Self-vulcanizing soft rubber lining compounds also vulcanize at ambient temperatures over a longer period of time (months). For certain media, partial vulcanization is often sufficient and full vulcanization then occurs under operating conditions.

0. Steel, sandblasted
1. PRIMER PR 500-1
2. PRIMER S 500-2
3. ADHESIVE TC 5000
4. CHEMOLINE 4 B



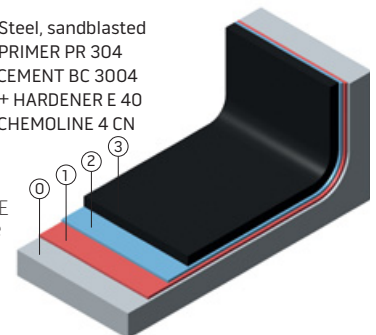
Typical build-up, using CHEMOLINE 4 B as example

CHEMOLINE soft rubber lining – vulcanized:

In these soft rubber linings, such as **CHEMOLINE 4 CN**, the rubber sheets are vulcanized and contain an easy-to-bond CN base layer. These rubber sheets can be bonded to both steel and concrete substrates. These rubber lining materials will be applied using special **REMA TIP TOP** adhesives and no further vulcanization is necessary. The applied rubber lining can be put directly into service without any further loss of time due to a vulcanization process.

0. Steel, sandblasted
1. PRIMER PR 304
2. CEMENT BC 3004 + HARDENER E 40
3. CHEMOLINE 4 CN

Typical build-up, using CHEMOLINE 4 CN as example



CHEMONIT hard rubber lining

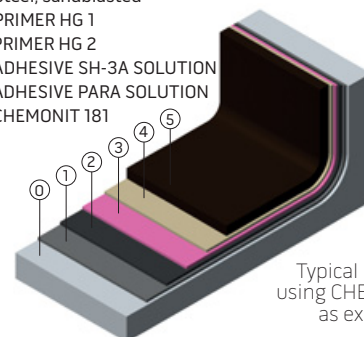
CHEMONIT hard rubber lining materials are applied un-vulcanized and must be subsequently vulcanized. Vulcanization is normally carried out in an autoclave under temperature and pressure. Special hard rubber lining compounds can also be vulcanized on the construction site with steam or hot water.

ON-SITE RUBBER LININGS

Here, **REMA TIP TOP** has developed rubber linings for all industrial sectors that can be used on site no matter what the size of the component is. These on-site rubber linings offer optimal perfection for storage containers, pipes, reaction vessels, flue gas scrubbers and others, but also for concrete components such as waste water sewers and deionizing and neutralization basins. **REMA TIP TOP** on-site rubber lining is eminently suitable not only for acid, lye and salt solutions whose effects are increased by high temperatures or temperature change; it is also excellently suited to mechanical stresses.

Different materials are used depending on the requirements and the circumstances on site.

0. Steel, sandblasted
1. PRIMER HG 1
2. PRIMER HG 2
3. ADHESIVE SH-3A SOLUTION
4. ADHESIVE PARA SOLUTION
5. CHEMONIT 181



Typical build-up, using CHEMONIT 181 as example

CHEMOLINE – Soft rubber lining systems

CHEMOLINE 3 / 3 CN

Polymer: Polychloroprene rubber (CR)
Chemically resistant against: Caustic soda solutions, acids and wastewater.
Continuous use temperature: 85°C
Applications / Miscellaneous: Oil-resistant and abrasion-resistant against media with a high solids content. DIBt approval: Z-59.22-165

CHEMOLINE 4 A / 4 B / 4 CN

Polymer: Bromobutyl rubber (BIIR)
Chemically resistant against: Mineral acids, bases, polar solvents, aqueous phases and also excellent diffusion resistance to gases such as sulphur dioxide, nitrogen oxides and water vapour.
Continuous use temperature: 110°C / 85°C
Applications / Miscellaneous: Various uses, e.g. in flue-gas desulphurisation, in brown-coal power stations, mineral processing. Available as pre-vulcanized, self-vulcanizing or autoclave version. DIBt approval: Z-59.22-159, Z-59.22-149, Z-59.22-162

CHEMOLINE 8 / 8 CN

Polymer: Chlorosulphonated polyethylene (CSM)
Chemically resistant against: Mineral acids, oxidising acids, bases, polar solvents, aqueous phases and hypochlorite solutions.
Continuous use temperature: 80°C
Applications / Miscellaneous: Particularly suitable for road tankers and tank wagons. DIBt approval: Z-59.22-234

CHEMOLINE 12 FDA / 12 CN FDA

Polymer: Chlorobutyl rubber (CIIR)
Chemically resistant against: Inorganic acids, bases and aqueous media.
Continuous use temperature: 85°C
Applications / Miscellaneous: **CHEMOLINE 12 CN FDA** is developed specifically for the onsite rubber lining of chemically loaded steel or concrete components. Linings of storage tanks and agitated tanks, basins, pipe spools as well as various vessels in the phosphoric acid industry.

CHEMOLINE 55 / 55 CN

Polymer: Natural rubber (NR)
Chemically resistant against: Mineral acids, bases and aqueous media.
Continuous use temperature: 60°C
Applications / Miscellaneous: **CHEMOLINE 55** is a soft rubber lining system with high abrasion resistance especially designed for wet environments in mineral processing and fertilizer industry.

CHEMOLINE 70 / 70 CN

Polymer: Chlorobutyl rubber (CIIR) / Polyvinylchloride (PVC)
Chemically resistant against: Mineral acids, bases, aqueous phases and in particular concentrated hydrochloric acid up to 60°C-80°C.
Continuous use temperature: 80°C
Applications / Miscellaneous: Widely used in electroplating and particularly where hydrochloric acid is contacted (HCl storage tanks).

CHEMOLINE RT / RT CN

Polymer: Brombutyl rubber (BIIR)
Chemically resistant against: Mineral acids, bases, polar solutions, aqueous media, and especially oxidising media like nitric acid, chromic acid and sodium hypochlorite.
Continuous use temperature: 120°C / 85°C
Applications / Miscellaneous: Electroplating, hydrochloric acid storage tanks, tank wagons as well as reaction vessels with high operating pressure.

CHEMONIT – Hard rubber lining systems

CHEMONIT 18 HT

Polymer: Natural rubber (NR), graphite, ESD
Chemically resistant against: Mineral acids, bases, organic media and aqueous media.
Continuous use temperature: 120°C
Applications / Miscellaneous: The electroconductive material is particularly suitable for frequent temperature changes and is used in process vessels, fractionating columns, crystallizers etc. No high voltage spark test possible.

CHEMONIT 31

Polymer: Natural rubber (NR)
Chemically resistant against: Mineral acids, bases, aqueous phases and organic chemicals.
Continuous use temperature: 100°C
Applications / Miscellaneous: Diverse components in the chemical, chlorine and steel industries, in mineral processing, electroplating and environmental protection. DIBt approval: Z-59.22-140.

CHEMONIT 33

Polymer: Natural rubber (NR)
Chemically resistant against: Mineral acids, bases, aqueous phases and organic chemicals, in particular moist chlorine.
Continuous use temperature: 105°C
Applications / Miscellaneous: Diverse components in the chemical, chlorine and steel industries, in mineral processing, electroplating and environmental protection. DIBt approval: Z-59.22-312

CHEMONIT 35

Polymer: Isoprene rubber (IR) / Styrene-butadiene rubber (SBR)
Chemically resistant against: Mineral acids, bases, aqueous phases and in particular excellent resistance against moist chlorine.
Continuous use temperature: 100°C
Applications / Miscellaneous: Wide application possibilities for components subject to high chemical-thermal loads. The particularly long shelf life and the possibility of autoclave, hot water or steam vulcanization makes **CHEMONIT 35** particularly suitable for construction site applications. DIBt approval: Z-59.22-322

CHEMONIT 20 KTW

Polymer: Isoprene rubber (IR)
Chemically resistant against: Mineral acids, bases, aqueous phases and organic aldehydes.
Continuous use temperature: 100°C
Applications / Miscellaneous: **CHEMONIT 20 KTW** specifically for the workshop rubber lining of steel components in the drinking water and food industry. Rubber linings of storage and filter tanks, accessories, instruments and of other miscellaneous equipment components.

REMA TIP TOP Product & Solutions

CONVEYING SOLUTIONS

Pulley Lagging

- PERFORMANCEGrip 70
- REMAGRIP Diamond Lagging
- REMAGRIP CK-X Ceramic Lagging
- REMAGRIP CP-X Smooth Ceramic Lagging
- T-REX
- UNIGRIP

Rollers & Pulleys

- REMASLEEVE
- REMAROLL
- REMATRACK

Skirting

- REMASKIRT
- UNISKIRT
- COMBI-Skirt
- T-REX Skirt

Belt Cleaners

- REMACLEAN - T-Bar Scrapers
- REMACLEAN - CAB Green
- REMACLEAN - CAB Grey
- REMACLEAN - Cleaning Brush

Repair Products

- Repair Patches
- Repair Strips
- REMA GOO
- RG 7000
- T-2 Repair System

Other

- Conveyor Belting
- REMACLEAT
- Edge Wall Corrugated
- REMASLIDE Impact Slider Bed Bars

WEAR & CORROSION PROTECTION

Wear Protection Lining

- REMA Performance Line
- REMALINE
- REMATHAN
- REMASTAR
- T-REX

Heavy Wear Protection

- REMALOX
- REMALOX HD
- KG Bars
- ZP Profile Bars
- REMAMILL
- RMS Modular Wear System
- REMA WEAR Repair

Corrosion Coatings & Linings

- REMA Epoxy Systems
- REMA Vinyl Ester Systems
- REMA Epoxy Novolac Systems
- Polymer Concrete Repair Systems

Rubber Linings

- CHEMOLINE
- CHEMONIT

Anticaking

- REMAFLON
- REMALEN
- REMASLIDE

Material Handling Hose

- Fixed Flange
- Split or Swivel Flange
- Cut End Hose

ADHESIVES & SOLUTIONS

Cements & Adhesives

- SC 4000 Black / White
- BC 3004 Blue Cement
- PC-4 Plastic Cement

Solutions

- PR 200 Metal Primer
- R50 Cleaning Solvent
- TIP TOP Hand Cleaner
- A&B Vulc Compound

Splice Kits

- Hot Splice Kits
- WK Press and Splice Material
- Filler Rubber
- CN Bonding Rubber

TOOLS & REPAIR

Tools

- Fabric Splicing Tool Kits
- Cold Repair Kits
- Rubber Knives
- Buffing Tools
- Rollers & Stitchers
- Combi Strippers
- Steel Cable Strippers
- Hot Vulcanizing Presses
- Rubber Cut Saw
- Extruder Gun
- Re-Grooving Tool

Other

- REMAWRAP Pipe Repair
- OTR Tire Patches



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