

TI 241K

Technical Information Surface Protection Linings
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VULKODURIT A 50

Single-ply soft rubber lining for the protection of steel components

Base

Natural rubber (NR)

Material Group

Workshop rubber linings

Description

Single-ply soft rubber lining based on natural rubber (NR), vulcanized in an autoclave.
Depending on the requirements, the layer thickness of the rubber sheet can be 2-8 mm.

Application

Rubber lining is mainly used in the following applications:

- Suspensions with high solids content
- Wear protection

Properties

- Excellent abrasion resistance
- Sustainable due to renewable raw material
- Unvulcanized rubber sheet
 - Easy application for difficult geometries
 - High adhesive strength to the steel substrate

Physical Data

Property [unit], Test method	Value
Abrasion resistance [mm ³], DIN ISO 4649	90
Temperature resistance [°C]	80
Shore A hardness, DIN ISO 7619, ASTM D 2240	55 ± 5
Peeling strength [N/mm], DIN EN 14879-4	≥ 3
Tensile strength [MPa], DIN 53504	≥ 10
Elongation at tear [%], DIN 53504	≥ 350
Rebound resiliency [%], DIN 53512	> 30
Maximum surface pressure [MPa]	2
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.07 ± 0.02

Data are mean values of 4 mm thick vulcanized rubber samples.

Chemical Resistance

Information of chemical resistance is available on request.

Substrate

Requirements

Application temperature	approx. 10–30 °C
Dew point distance	> 3 K
Dew point distance from 70% air humidity	> 5 K

Steel

Observe DIN EN 14879-1 and STEULER-KCH Forms 020 and 030.

The steel surface is blasted to near white blast cleaning. A surface cleanliness of Sa 2½ according to DIN EN ISO 12944-4 and the roughness grade "Medium (G)" according to DIN EN ISO 8503-1 must be achieved; surface roughness $R_z = 40\text{--}70 \mu\text{m}$. After blasting, the formation of new rust must be prevented by suitable measures, such as priming directly.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 003 (Steel) resp. STEULER-KCH-Test-Record 004 (Inspection of Grit Blasting Works).

Stainless steel must be abrasive blasted with non-ferritic abrasives.

Grey cast iron must be tempered in the autoclave prior to blast cleaning, in order to expel any inclusions of moisture.

Moisture

During application, the substrate must be kept dry. No moisture (condensate, mist, etc.) must get onto the material.

Packaging / Shelf life

All components must be stored and transported dry. Unless otherwise specified, the minimum shelf life applies to a storage temperature of 20 °C. Higher temperatures reduce, lower temperatures increase the minimum shelf life. The use of refrigerated containers should be considered on a project-by-project basis, especially when components are stored at temperatures below 20 °C in order to extend their shelf life. Keep the containers tightly closed (especially after material removal).

Component	Item number	Package	Content	Shelf life
Vulkodurite-A50-sheet 2-8 mm	6072320200–800	Roll		6 Months 12 Months < 15 °C
Primer 1	5040271039	Hobbock	23 kg	12 Months
Primer 2	5040274001	Hobbock	25 kg	12 Months
Vulkodurit-Adhesive 1300	5040502021	Hobbock	15 kg	3 Months 6 Months < 15 °C
KCH-Cleaner 1	5040016068	Canister	8.5 kg	24 Months
KCH-Diluent 5	5040021041	Canister	8 kg	24 Months
Release liners quality 2602/4706/125 C	9012015			

For handling, transport and storage observe the relevant safety data sheets.

Application

The rubber lining system VULKODURIT A 50 consists of the 1-component Primer 1, the 1-component Primer 2, the 1-component Vulkodurit-Adhesive 1300 and the Vulkodurit-A50-Sheet.

Apply Primer 1 on the steel substrate. Then apply Primer 2 once and then the adhesive twice. Apply KCH-Diluent 5 once to the rubber sheet. On older rubber sheets and seams, apply the adhesive once instead.

The rubber sheets are bonded to the substrate based on DIN EN 14879-4.

A permanent and strong bond is achieved by the subsequent vulcanisation process in the autoclave.

Consumption

Primer 1	approx. 0.15 kg/m ²
Primer 2	approx. 0.20 kg/m ²
Vulkodurit-Adhesive 1300	approx. 0.25 kg/m ² per application
KCH-Diluent 5	approx. 0.10 kg/m ²

The consumption figures already include the usual losses during application.

Safety and Disposal

The following points should be observed:

- Sufficient ventilation and venting (especially in pits and tanks)
- No smoking and no fire
- Safety Data Sheets
- Observe hazard warnings and safety instructions on labels
- Wear required personal protective equipment (avoid skin contact with materials)
- Clean and protect hands with skin protection soap (no solvents!) and skin protection cream
- Wear a dust mask when grinding (e.g. for repairs)
- Operating instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany)
- Accident prevention regulations by the Liability Insurance Association for the Chemical Industries (Germany)
- Avoid direct contact of the materials with the flame, especially during welding work (welding beads) on site

Preferably consume residual quantities. Do not pour into a spout or dustbin! Collect separately for disposal in durable, lockable and labelled containers.

Cleaning of Equipment

Tools soiled with uncured materials can be cleaned with KCH-Cleaner 1 (primer) and KCH-Diluent 5 (adhesive). Only clean in well ventilated areas.

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This issue replaces all previous versions.