

TI 243K

Technical Information Surface Protection Linings
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VULKODURIT A45

Soft rubber lining to protect steel components

Base

Natural rubber (NR)

Material Group

Workshop rubber linings

Description

Soft rubber lining based on natural rubber (NR) that is vulcanised in the autoclave. Depending on the requirements, the layer thickness of the rubber sheet can be 3 - 6 mm.

Use

VULKODURIT A45 is used to protect steel components from diluted acids and other corrosive aqueous media.

A particularly noteworthy feature is its resistance against abrasion.

Properties

VULKODURIT A45 is characterised by a superior abrasion resistance, good mechanical properties and a broad chemical resistance.

Physical Data

Property (unit), Test method	Value
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.04 ± 0.02
Shore A hardness, DIN 53505, ASTM D 2240	45 ± 5
Tensile strength [MPa], DIN 53504 *	≥ 16
Elongation at tear [%], DIN EN ISO 527, ASTM C 307	≥ 550
Peeling strength [N/mm], DIN EN 14879-4	≥ 4
Temperature resistance [°C]	80
Data are mean values	

*) The values were determined at 4 mm thick rubber samples.

Chemical Resistance

Information on the chemical resistance properties will be provided on request.

Substrate

Steel

Refer to DIN EN14879-1 as well as to STEULER-KCH-Formblatt 020.

The steel surface shall be sandblasted to a metallic bright finish. A preparation degree of SA 2 ½ as specified in DIN EN ISO 12944-4 and a roughness grade "medium (G)" as specified in DIN EN ISO 8503-1 must be achieved; minimum surface roughness $R_z = 50 \mu\text{m}$. After blasting, the formation of new rust must be prevented by suitable measures, e.g. immediate application of a primer.

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.

The substrate temperature should be in the range of approx. 10 - 30 °C, dew point distance min. 5 K.

Relative humidity: ≤ 75 %

During application, the substrate must be kept absolutely dry. Uncured material has to be protected from any kind of moisture (condensation, fog, precipitation or other water source).

Packaging / Shelf life

All components must be stored and transported dry and frost-free. Unless otherwise specified, the minimum shelf life applies to a storage temperature of 20 °C. Higher temperatures reduce, lower temperatures increase the 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).

Components	Item number	Package	Content	Shelf life
Primer 1	5040271039	Drum	23 kg	12 Months
Primer 2	5040274001	Drum	25 kg	12 Months
KCH-Diluent 5	5040021041	Canister	8 kg	24 Months
Vulkodurit-A45-Sheet	6072310200-650	Roll		6 Months 12 Months < 10 °C
Vulkodurit-adhesive 1300	5040502021	Drum	15 kg	3 Months 6 Months < 15 °C

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

Application

The VULKODURIT-A45-rubber-lining system is composed of the single-component Primer 1, the single-component Primer 2, the single-component Vulkodurit-adhesive 1300 and the VULKODURIT-A45-rubber sheet.

Spread the Primer 1 on the steel substrate. Then apply one layer of Primer 2 and two layers of adhesive. Spread the adhesive on the rubber sheet.

The rubber sheets are brushed the KCH-diluent 5 on the rubber sheets and glue the sheets to the substrate according DIN EN 14879-4.

A durable and solid bonding will be achieved by firmly pressing down the rubber sheet and the subsequent vulcanisation process.

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

Safety and Disposal

- Sufficient aeration and de-aeration (especially in tanks and pits).
- No smoking/no fire
- Refer to the Safety Data Sheets
- Observe danger references and safety recommendation labels.
- Wear required personal protective equipment (avoid skin contact with materials)
- Clean and protect hands with skin protective soap and skin protection cream (no solvents)
- Wear a dust mask when sanding (e.g. for repairs).
- Instructions as per § 14 of GefahrstoffV (Toxic Substances Act) and TRGS 507 (Technical regulations for Hazardous Substances - Germany)
- Accident precautions issued by the Liability Insurance Association for the Chemical Industries (Germany)

Do not expose materials to heat or open flame, this applies in particular to welding works (weld beads).

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

Cleaning of Equipment

The working tools contaminated with the adhesive are cleaned using KCH-diluent 5.

Cleaning must be carried out prior to hardening of the material. Cleaning must be carried out outdoors.

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This issue replaces all previous versions.