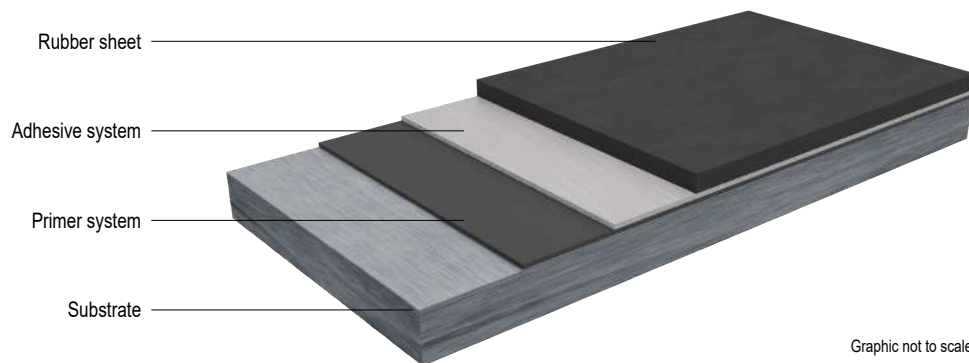


VULKODURIT 1250 KTW

FDA and KTW compliant hard rubber lining for drinking water and food applications

System Design



Graphic not to scale

Description and Use

Single-layer hard rubber lining based on natural rubber (NR) and styrene-butadiene rubber (SBR), vulcanized in an autoclave. VULKODURIT 1250 KTW is compliant with the specifications for aqueous foodstuffs of the FDA (US FDA 21 CFR 177.2600 e) and the requirements of KTW-BWGL Annex D. Corresponding external test certificates can be provided on request.

Depending on the requirements, the layer thickness of the rubber sheet can be 3 - 6 mm.

Rubber lining is mainly used in the following applications:

- Drinking water
- Aqueous food

Properties

- FDA conformity
- KTW conformity

Physical Data

Physical Property	Testing Standard	Value	Unit
Temperature resistance		100	°C
Shore D hardness	DIN ISO 7619-1	72 ± 5	
Adhesive strength	DIN EN ISO 4624 ^[1]	≥ 10	MPa
Tear resistance	DIN 53504	> 15	MPa
Elongation at tear	DIN 53504	> 10	%
Maximum surface pressure		10	MPa
Density	DIN EN ISO 1183-1	1.18 ± 0.02	g/cm ³

Data are average values of 4 mm thick, vulcanized rubber samples

Chemical Resistance

Information on chemical resistance is available on request.

Substrate

Requirements

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

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

Steel

Refer to DIN EN14879-1 as well as to STEULER-KCH-Formsheet 020 and 030.

The steel surface is blasted to near white blast cleaning. The degree of preparation 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; roughness depth R_z = 50 - 70 µm. After blasting, the formation of new rust must be prevented by suitable measures, such as priming directly.

The condition of the substrate is documented using STEULER-KCH test report 003 (steel) or STEULER-KCH test report 004 (Inspection of Grit Blasting Works).

Stainless steel is blasted with ferrite-free blasting material.

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

^[1] Based on the relevant standard.

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
Vulkodurit-1250KTW-Sheet 3 - 6 mm	6071503300-600	Roll		6 months 12 months < 15 °C
Primer 1	5040271039	Hobbock	23 kg	12 months
Primer 2	5040274001	Hobbock	25 kg	12 months
Vulkodurit-Brushing-Adhesive	5040257131	Hobbock	21 kg	6 months
Vulkodurit-Adhesive LS3A	5040253014	Hobbock	22 kg	6 months
Seam-Solution 2104/N1	5040703040	Hobbock	18 kg	12 months
KCH-Diluent 5	5040021041	Canister	8 kg	24 months
KCH-Cleaner 1	5040016068	Canister	8.5 kg	24 months
Release liners quality 2602/4706/125 C	9012015			

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

Application

Substrate

Steel

Steel is primed with a pre-coat mixture.

Pre-Coat Mixture

Component	Part by weight	Part by volume
Vulkodurit-Brushing-Adhesive	100	2.00
Primer 2	10	0.18

The pre-coat mixture and Vulkodurit-Adhesive LS3A are each applied once to the substrate.

The following waiting times must be observed:

Material Application	Consumption kg/m ²	Waiting time for next layer	
		At least	At most
Pre-coat mixture	0.220	3 h	2 d
Vulkodurit-Adhesive LS3A	0.250	2 h	5 d

Stainless Steel and Cast Iron

Stainless steel and grey cast iron are primed with Primer 1 and Primer 2.

Primer 1 and Primer 2 are each applied once to the substrate. The Vulkodurit-Adhesive LS3A is then applied twice with suitable tassels or brushes. Rollers must not be used.

The following waiting times must be observed:

Material Application	Consumption kg/m ²	Waiting time for next layer	
		At least	At most
Primer 1	0.150	2 h	3 m
Primer 2	0.200	2 h	5 d
Vulkodurit-Adhesive LS3A	0.250	2 h	2 d
Vulkodurit-Adhesive LS3A	0.250	2 h	5 d

Rubber Sheet

Apply KCH-Diluent 5 on the rubber sheet once. Apply Seam-Solution 2104/N1 on older rubber sheets and seams.

The following waiting times must be observed:

Material Application	Consumption kg/m ²	Waiting time for next layer	
		At least	At most
Adhesive side and bevel cuts			
KCH-Diluent 5	0.100	5 min	10 min
Older rubber sheets and seams			
Seam-Solution 2104/N1	0.100	15 min	24 h

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.