

TI 245

Technical Information Surface Protection Linings
Issue 06.07.2022

ALKADUR HR

Self-levelling, crack-bridging and chemically highly resistant coating system.

Base

Epoxy resin

Material Group

Levelling Coatings

Sealing layers

With national technical approval by DIBt (abZ)

Description and use

Self-levelling, crack-bridging and highly chemically resistant coating system for concrete surfaces.

National technical approval by DIBt, Berlin Z-59.16-268.



The complete coating system is trafficable and its very good general chemical resistance against fats, oils, solvents, acids and bases allows for the application in a wide industrial range, indoors as well as outdoors.

When cured, the sealing layer is particularly low in emissions and suitable for indoor use. It fulfils the emission requirements of the AgBB scheme and Class A+ of the VOC regulation of the French Ministry of Environment (MEDDTL).

If a covering of the sealing layer by brick or tile lining is required, e.g. system ALKADUR HR LF PROTECT 1 [245B] can be used.

Properties

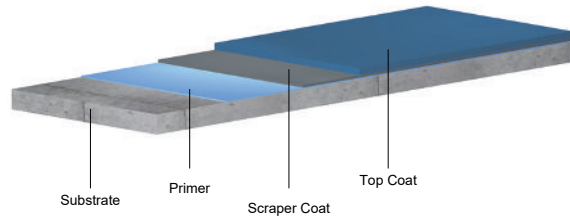
- Self-levelling
- Plain coloured
- Jointless
- Smooth surface
- Crack-bridging (according to national technical approval) ≤ 0.3 mm at 1.6 mm Top Coat
- Crack-bridging (according to national technical approval) ≤ 0.5 mm at 2.0 mm Top Coat
- Fit for vehicles with pneumatic, solid rubber, Vulkollan or polyamide tyres
- Depending on the chemical stress, temperature resistant up to 50 °C on the surface (up to 100 °C for short periods, e.g. with high-pressure cleaners).

System Design

Floor surfaces

- Alkadur HR Primer
- Alkadur HR Scraper Coat
Pore-filling Scraper Coat (if necessary)
- Alkadur HR Top Coat
Layer thickness approx. 2.0 mm or approx. 1.6 mm

Total thickness is approx. 2.1 mm or 1.7 mm.



Graphic not true to scale

Wall surfaces

- Alkadur HR Primer
- Alkadur HR Top Coat wall with PE-Fibre 920T as thixotropic agent

Total thickness is approx. 3.1 mm.

Physical Data

Parameters for the sealing layer

Property [unit], Test method	Value
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.14
Shore D hardness, DIN ISO 7619, ASTM D 2240	75
Abrasion resistance [mg/1000 turns] ASTM D 4060, Taber Disc CS 17	42
Modulus of elasticity [MPa], DIN EN ISO 178, ASTM C 580	500*
Tensile strength [MPa], DIN EN ISO 527	35*
Crack bridging at 1.6 mm top coat [mm]	0.3
Crack bridging at 2.0 mm top coat [mm]	0.5
Thermal Limit [°C]	50
for a short time (e.g. for high-pressure cleaners)	100

Data are mean values.
*after heat treatment

Chemical Resistance

Very good resistance to solvents, acids, alkalis, oils and fats.

For detailed information on chemical resistance, please refer to the national technical approval resp. the Technical Information TI 230 C. It must be checked on a project-specific basis whether the use of an electrostatically dissipative coating is necessary.

Substrate

Requirements

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

Optimal temperature is 20 °C. Higher and lower temperatures influence the pot life and consistency of the mixtures.

Avoid draughts and solar radiation.

Concrete

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 010.

To achieve sufficient adhesive tensile strength, the substrate must generally be pre-treated in such a way that it is free of cement slurry, cement skin, loose and friable parts, structural defects and separating substances.

The residual moisture of cementitious substrates must not exceed 4 %.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 006 (concrete).

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. The minimum shelf life applies to a storage temperature of 20 °C, unless otherwise specified. Higher temperatures reduce, lower temperatures increase the minimum shelf life.

Component	Item number	Package	Content	Shelf life
Alkadur-HR-Solution	5035197001	Hobbock	25 kg	24 Months
Alkadur-HR-Solution	5035197020	Hobbock	16 kg	24 Months
Alkadur-HR-Hardener	5035198085	Drum	8.8 kg	24 Months
Alkadur-HR-Hardener	5035198001	Hobbock	25 kg	24 Months
Alkadur-HR-Top-Coat-Solution RAL 7030*	5035191002	Hobbock	20 kg	24 Months
Alkadur-HR-Top-Coat-Solution RAL 7032*	5035193002	Hobbock	20 kg	24 Months
SKC-Filler 12	5011199001	Bag	25 kg	24 Months
PE-Fibre 920T	5019028006	Bag	10 kg	24 Months

* The colours may differ slightly from the RAL colour template. Other colours on request.

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

Mixing Ratio / Consumption

Alkadur HR Primer

Component	Mix	kg / mix	kg/m ²
Alkadur-HR-Solution	1.6 l	1.80	0.161
Alkadur-HR-Hardener	1.0 l	1.00	0.089
Total		2.80	0.250
Area per mix	≈ 11.2 m ²		
Application steps	1		

Alkadur HR Scraper Coat

Component	Mix	kg / mix	kg/m ²
Alkadur-HR-Solution	1.6 l	1.80	0.382
Alkadur-HR-Hardener	1.0 l	1.00	0.212
SKC-Filler 12	3.5 l	4.50	0.956
Total		7.30	1.550
Area per mix	≈ 4.7 m ² at 1 mm		
Application steps	1		
Consumption per 1 mm	1.55 kg/m ²		
Consumption	As necessary, depending on the surface roughness of the substrate		

Alkadur HR Top Coat floor

Component	Partial mix	kg / mix	kg/m ² 1.6 mm	kg/m ² 2.0 mm
Alkadur-HR-Top-Coat-Solution	3.5 l (4.00 kg)	20.00**	1.255	1.596
Alkadur-HR-Hardener	1.8 l (1.76 kg)	8.80**	0.545	0.704
Total		28.80	1.800	2.300
Addition of thixotropic agent for soil slopes > 2 %.				
PE-Fibre 920T	1 l (0.03 kg)	0.15 (5.0 l)	0.009	0.012
Area per partial mix			≈ 3.2 m ²	≈ 2.5 m ²
Area per mix			≈ 16 m ²	≈ 12.5 m ²
Application steps			1	1
Layer thickness			≈ 1.6 mm	≈ 2.0 mm

** pre-dosed package

Alkadur HR Top Coat wall

Component	Mix	kg / mix	kg/m ²
Alkadur-HR-Top-Coat-Solution	3.5 l	4.00	2.200
Alkadur-HR-Hardener	1.8 l	1.76	0.968
PE-Fibre 920T	8.0 l	0.24	0.132
Total		6.00	3.300
Area per mix	3.6 m ² per application step		
Application steps	2		
Layer thickness	1.5 mm per application step ≈ 3 mm total		

Pot Life

Pot life depends on temperature.

Temperature	Pot life
10 °C	70 min
20 °C	30 min
30 °C	20 min

Waiting and curing times

The minimum waiting time until further processing and the maximum waiting time between application steps are as follows (approx.):

Temperature	Walkable after	Maximum waiting time
10 °C	24 h	72 h
20 °C	16 h	48 h
30 °C	10 h	16 h

The finished coating is fully mechanically and chemically resistant at 20 °C after 7 days.

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.

GISCODE

Product	GISCODE
Alkadur HR Primer	RE90
Alkadur HR Scraper Coat	RE90
Alkadur HR Top Coat	RE90

Cleaning and Maintenance

Observe cleaning instructions for STEULER-KCH Industrial Floors (Technical Information TI 198).

Cleaning of Equipment

Tools that are soiled with uncured materials can be cleaned with Steuler-Universal-Cleaner. Only clean in well ventilated areas.

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This issue replaces all previous versions.