

TI 231B

Technical Information Surface Protection Linings
Issue 18.09.2019

ALKADUR ES LF

Jointless, electrically conductive broadcast coating system for concrete floor areas; suitable for ESD-protected areas.

Base

Epoxy resin

Material Group

Floor- / wall coatings – Broadcast coatings

Description

Jointless, electrically conductive broadcast coating for concrete floor areas with good chemical resistance.

The surface is non-slip.

Use

Coating of concrete and screed surfaces where electrically conductive coating is required. ALKADUR ES LF can be used where ESD-requirements are to be performed.

Properties

- jointless
- slip resistant surface
- electrically conductive; suitable for ESD-protected areas; complies with the requirements of DIN EN 61340-5-1 at an air humidity of $\geq 12\%$
- total thickness approx. 2.5 - 3.0 mm
- plain-coloured
- thermal resistance up to 60 °C
- suitable for fork lift traffic

Physical Data

Property (unit), Test method	Value
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.8
Abrasion resistance [cm ³ /50 cm ²], DIN 52108, ASTM C 241	4.65
Electrical leakage resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	< 1 x 10 ⁶
Charging of persons [V], DIN EN 61340-4-5	7.5 x 10 ⁵ - 3.5 x 10 ⁷
Shore D hardness, DIN 53505, ASTM D 2240	75
System resistance [Ohm], DIN EN 61340-4-5	< 50
Lowest working temperature [°C]	12
Maximum working temperature [C]	30
Data are mean values	

Chemical Resistance

Resistant to solvents, petrol, fats, oils, salts and salt solutions, diluted acids and alkalis.

For detailed information about the chemical resistance please refer to Technical Information TI 230.

Please refer to the column ALKADUR DFG.

Substrate

Concrete / screed

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

To attain a sufficient adhesive tensile strength, the substrate is generally to be pretreated in such a way that it is free of cement slurry, cement skin, loose and crumbly particles, structure imperfections and separating substances.

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

The substrate should have a temperature of approx. 10–25 °C.

Moisture

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). Distance to dew point has to be at least 3 K, at a relative humidity of above 70 % at least 5 K.

System Design

- Alkadur-DFG Primer + Sprinkling with SKC-Filler 16
- Alkadur DFG Conductive Layer + sprinkling with SKC-Filler 1L / 2L
- Sealing (2 work steps)
- *Alternatively Sealing with improved UV-resistance (2 work steps)*

Packaging / Shelf life

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

Components	Item number	Package	Content	Shelf life
Alkadur-DFG/V-Solution 1	5035120011	Jug	3 kg **	24 Months
Alkadur-DFG-Solution 2 unpigmented	5035122004	Drum	6 kg **	24 Months
Alkadur-ES-Sealing Solution RAL 7032*	5035158001	Drum	25 kg	24 Months
Alkadur-ES-Sealing Solution RAL 7030*	5035157001	Drum	25 kg	24 Months
Alkadur-DV-Hardener	5035142011	Canister	3 kg	24 Months
SKC-Filler 11	5011198002	Bag	20 kg	24 Months
SKC-Filler 13	5011200001	Bag	25 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 kg	24 Months
SKC-Filler 1L	5011192001	Bag	25 kg	24 Months
SKC-Filler 2L	5011193001	Bag	25 kg	24 Months
SKC-Filler 3L	5011194017	Bag	12.5 kg	24 Months
Diluent EN	5060005005	Canister	4 kg	24 Months
Copper band self-adhesive	9703301015	Roll 19-20 mm wide		unlimited

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

** predosed packaging

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

Mixing Ratio / Consumption

Alkadur DFG Primer

	Part by weight	Part by volume
Alkadur-DFG/V-Solution 1	1.0	0.97
Alkadur-DFG-Solution 2	2.0	1.74
Total consumption in kg/m ² (approx.)	0.250	
Work steps	1	
Spreading with SKC-Filler 16; consumption: 3.000 kg/m ²		

Alkadur DFG Conductive Layer

	Part by weight	Part by volume
Alkadur DFG/V-Solution 1	1.00	0.97
Alkadur DFG-Solution 2	2.00	1.74
SKC-Filler 3L	2.70	3.00
Diluent EN	0.04	0.05
Consumption	1.583 kg/m ²	
Work steps	1	
Layer thickness	1.3 mm	
Sprinkling with SKC-Filler 1L / SKC-Filler 2L; Consumption: 4.000 kg/m ²		

Sealing

1st Sealing	Part by weight	Part by volume
Alkadur-ES-Sealing-Solution	2.20	1.91
Alkadur DFG/V-Solution 1 <i>Alternativ: Alkadur-DV-Hardener for sealing with improved UV resistance</i>	1.00	0.97
SKC-Filler 13	4.8	3.56
Consumption	If the conductive layer was sprinkled with SKC-Filler 2L 0.720 kg/m ² If the conductive layer was sprinkled with SKC-Filler 1L 0.900 kg/m ²	
Work steps	1	
2nd Sealing	Part by weight	Part by volume
Alkadur-ES-Sealing-Solution	2.20	1.91
Alkadur DFG/V-Solution 1 <i>Alternativ: Alkadur-DV-Hardener for sealing with improved UV resistance</i>	1.00	0.97
SKC-Filler 11	3.2	2.46
Consumption	Sprinkling with SKC-Filler 2L: 0.320 kg/m ² Sprinkling with SKC-Filler 1L: 0.400 kg/m ²	
Work steps	1	

Waiting Times

See curing times.

Pot Life

Pot life depends on temperature:

10 °C	approx. 70 minutes
20 °C	approx. 30 minutes
30 °C	approx. 10 minutes

Curing times

Time to walkability between single applications depend on the temperature:

Temperature	Min. Time
15 °C	12 h
20 °C	8 h
30 °C	3 h

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

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.

GISCODE

Product	GISCODE
Alkadur DFG Primer	RE 1
Alkadur DFG Conductive Layer	RE 1
Alkadur ES Sealing Solution	RE 1

Cleaning of Equipment

With STEULER UNIVERSAL CLEANER, Technical Information TI 190. Only clean in well ventilated areas.

Cleaning and Maintenance

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

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This issue replaces all previous versions.