

TI 265

Technical Information Surface Protection Linings
Issue 18.09.2019

ALKADUR ESC LF

Jointless, electrically conductive broadcast coating system with coloured sand for concrete floor areas.

Base

Epoxy resin

Material Group

Floor- / wall coatings – Broadcast coatings

Description

Jointless, electrically conductive broadcast coating for concrete substrates with good chemical resistance. A decorative colouring is achieved by broadcasting coloured sand. The thickness of the system may be varied. The surface can be carried out slip resistant or smooth-matt.

Use

Coating of concrete and screed surfaces in areas where a electrically conductive coating with decorative appearance is required, e. g. in laboratories or clean rooms.

Properties

- jointless
- electrically conductive
- decorative colouring by sprinkling with coloured sand
- smooth-matt or slip-resistant surface available
- suitable for fork lift traffic
- Total thickness approx. 4.0 mm
- thermal resistance up to 60 °C (continuous load); up to 80 °C (short-period load)

Physical Data

Property (unit), Test method	Value
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579	90
Electrical leakage resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	$\leq 1 \times 10^6$
Shore D hardness, DIN 53505, ASTM D 2240	85
Lowest working temperature [°C]	10
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
- Alkadur DV Filling LF, 2 work steps sprinkling with SKC-Colour-Filler LF
- Surface sealing slip resistant = 2 x Alkadur DV
- *Alternatively Surface sealing smooth-matt = 1 x Alkadur DV + 1 x Alkadur DV LF*
- *Final sealing with Oxydur PUW LF matt lacquer (TI 110 A) for smooth matt surfaces*

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-DV-Resin	5035143004	Drum	6 kg	24 Months
Alkadur-DV-Hardener	5035142011	Canister	3 kg	24 Months
Alkadur-Accelerator	5035108036	Canister	1.5 kg	24 Months
Oxydur-PUW-Solution 1 matt	5034085003	Drum	5 kg **	12 Months
Oxydur-PUW-Solution 2	5034094035	Can	0.4 kg **	6 Months
Diluent EN	5060005005	Canister	4 kg	24 Months
Cab-O-Sil TS720	5011016006	Bag	10 kg	24 Months
Cab-O-Sil TS720	5011016003	Bag	5 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 kg	24 Months
SKC-Color-Filler LF 1 white-blue-black*	5011022001	Drum	25 kg	24 Months
SKC-Color-Filler LF 2 white-black*	5011031001	Drum	25 kg	24 Months
SKC-Color-Filler LF 3 white-blue-black*	5011032001	Drum	25 kg	24 Months
SKC-Color-Filler LF 4 grey-black*	5011033001	Drum	25 kg	24 Months
SKC-Filler 3L	5011194017	Bag	12.5 kg	24 Months
SKC-Filler 14	5011201001	Bag	25 kg	24 Months
SKC-Fibre LF 160 g	5019001212	Can	0.160 kg **	24 Months
Carbon-Fibre 4.5 mm	5019002126	Pouch	1 g	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
Diluent EN	0.06	0.08
Consumption	0.255 kg/m ²	
Work steps	1	
Layer thickness	approx. 0.1 mm	
Sprinkling with SKC-Filler 16		
Consumption	1.000 – 1.500 kg/m ²	

Alkadur DFG Conductive Layer

	Part by weight	Part by volume
Alkadur-DFG/V-Solution 1	1.00	0.97
Alkadur Accelerator	0.05	0.05
Alkadur-DFG-Solution 2	2.00	1.74
SKC-Filler 3L	3.00	3.30
Diluent EN	0.04	0.05
Consumption	1.522 kg/m ²	
Work steps	1	
Layer thickness	1.0 mm	

Alkadur DV Filling LF

	Part by weight	Part by volume
Alkadur-DV-Resin	2.0	1.74
Alkadur-DV-Hardener	1.00	0.98
SKC-Fibre LF	0.06	0.05
SKC-Filler 14	0.14	0.09
Consumption	1. application: 0.400 kg/m ² 2. application: 0.600 kg/m ²	
Work steps	2	
Sprinkling	after each application with SKC-Color-Filler LF	
Consumption per application	3.000 – 4.000 kg/m ²	
Consumption	6.000 – 8.000 kg/m ²	

Sealing Solution Alkadur DV

	Part by weight	Part by volume
Alkadur-DV-Resin	2.00	1.74
Alkadur-DV-Hardener	1.00	0.98
Cab-O-Sil TS 720	0.02	0.45
Consumption	1st Sealing 0.400 kg/m ² 2nd Sealing slip-resistant 0.150 kg/m ²	
Work steps	2	

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Alternative Sealing smooth - matt Alkadur DV LF

	Part by weight	Part by volume
Alkadur-DV-Resin	2.00	1.74
Alkadur-DV-Hardener	1.00	0.98
SKC-Fibre LF	0.06	0.05
For inclining surfaces as needed Cab-O-Sil TS720		
Consumption	0.500 kg/m ²	
Work steps	1	
+Final sealing with OXYDUR PUW-LF MATT VARNISH	Part by weight	Part by volume
See Technical Information 110 A		
Consumption	0.108 kg/m ²	
Work steps	1	

Waiting Times

See curing times.

Pot Life

Pot life depends on temperature:

15 °C	approx. 70 minutes
20 °C	approx. 40 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
Alkadur DV Filling LF	RE 1
Alkadur DV	RE 1
Oxydur PUW LF matt varnish	W 3/DD

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.