STEULER | Linings

TI 408

Technical Information Surface Protection Linings
Issue 12.02.2020

OXYDUR VE BK

Module kit based on epoxy novolac vinyl ester resin.

Description and use

The modular system OXYDUR VE BK offers comprehensive protection against organic, inorganic and oxidizing stresses. All components consist of the same basic components (Oxydur-VEU-Solution, Oxydur-Accelerator D and Oxydur-Hardener C). Different fillers are added, so a wide range of applications can be covered.

Properties

- temperature resistant:
  up to 60 °C (as sealing layer on concrete);
  up to 100 °C (on steel substrates - depending on chemical stress);
  up to 120 °C (as sealing layer under tiles or bricks)
- liquid-tight
- jointless application
- good chemical and mechanical resistance (see Technical Information TI 210E)

Depending on version:

- crack bridging (depends on integrated fabric)
- Self-levelling
- anti-slipping
- electrically conductive (acc. to DIN EN 14879-3)

Systems

The following systems can be implemented with the modular system:

Primer (OXYDUR VE BK PRIMER or ALKADUR HR BK PRIMER)

For closing pores and better adhesion.

Alkadur HR Primer is recommended.

Concrete and steel substrates must always be primed. If a suitable substrate already exists, it may be dispensed with in consultation with the application technology.

Filling (OXYDUR VE BK FILLING)

To smooth the surface or to increase total thickness of the system.

- If required: Alkadur HR or Oxydur VE Primer

Variants:

- Oxydur VE Trowel Coat for Walls
- Oxydur VE floor filling
- Oxydur VE Conductive floor filler

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Laminate (OXYDUR VE BK LAMINATE)

Crack-bridging laminate system for chemically resistant and liquid-tight linings on concrete and steel substrates. Can be combined with other lining systems, e. g. broadcast coating systems or tile or brick linings.

- If required: Alkadur HR or Oxydur VE Primer
- Oxydur VE Wall Filler (Laminating Filler for Wall and Floor)
- Oxydur VE Laminate with Oxydur VE Laminating Solution (different configurations possible)

Broadcast Coating (OXYDUR VE BK BROADCAST COATING)

Jointless, highly resistant coating system. The coloring is done by sealing the surface (there are different versions available, even coloured versions). Slip resistance and trafficability can be adapted to specific projects.

- Alkadur HR or alternative Oxydur VE Primer
- Oxydur VE floor filling
- Oxydur VE seal (there are different versions available, even coloured versions)

Conductive Broadcast Coating (OXYDUR VE BK CONDUCTIVE BROADCAST COATING)

For conductive floor coatings.

- Alkadur HR or alternative Oxydur VE Primer
- Oxydur VE conductive floor filler
- Oxydur VE seal (there are different versions available, even coloured versions)

Self Levelling Coating

Self-levelling coating system for concrete substrates (Top Coat not part of the construction kit!).

- Alkadur HR or alternative Oxydur VE Primer
- Oxydur VE Floor filler or conductive floor filler
- Oxydur VE SL or Oxydur VE-SL LF coating

Compare Application Instruction OXYDUR VE SL or OXYDUR VE-SL LF

Polybeton (OXYDUR VE BK POLYBETON FOR MOULDED PARTS)

Especially for unusual geometries.

- Oxydur VE Polybeton (Grounting compound for moulded parts)

Substrate

Requirements

Processing 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 processing time and consistency of the compounds and can change consumption, coating thickness and properties.

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 condition of the substrate must be documented by STEULER-KCH-Test protocol 006 (concrete) or STEULER-KCH-Test protocol 007 (screed).

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Steel

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 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 = 70 µm. After blasting, the formation of new rust must be prevented by suitable measures, e. g. priming directly.

The condition of the substrate must be documented by STEULER-KCH-Test-Record 003 (Steel) or STEULER-KCH-Test-Record 004 (Inspection of Grit Blasting Works).

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).

Packaging / Shelf life

All components must be stored and transported dry. 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
Oxydur-VEU-Solution	5032042001	Hobbock	25 kg	6 Months
Oxydur-VEU-Solution	5032042015	Barrel	200 kg	6 Months
Oxydur-VEU-Solution	5032042025	Container	1000 kg	6 Months
Oxydur-Accelerator D	5032007023	Jug	2.5 kg	24 Months
Oxydur-Hardener C	5032015007	Bottle	1 kg	12 Months
Alkadur-HR-Solution	5035197020	Hobbock	16 kg	24 Months
Alkadur-HR-Solution	5035197001	Hobbock	25 kg	24 Months
Alkadur-HR-Hardener	5035198085	Drum	8.8 kg	24 Months
Alkadur-HR-Hardener	5035198001	Hobbock	25 kg	24 Months
Oxydur-WV-Powder	5011119002	Bag	20 kg	24 Months
SKC-Filler 12	5011199001	Bag	25 kg	24 Months
SKC-Filler 15	5011202001	Bag	25 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 kg	24 Months
SKC-Filler 30	5011215001	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
Copper band self-adhesive	9703301015	Roll 19-20 mm wide		Unlimited
Glass-Fibre Mat 300 g/m²	9300900390	Roll 1.27 m wide		Unlimited
Glass-Fibre Mat 450 g/m²	9300900388	Roll 1.27 m wide		Unlimited
Glass-roving-mat 580 g/m²	9300090008	Roll 1.25 m wide		Unlimited
Glass-roving-mat 240 g/m²	9300090208	Roll 1.25 m wide		Unlimited
Glass Fleece 30 g/m²	9300900089	Roll 1.00 m wide		Unlimited

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

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Pot Life

Pot life depends on temperature:

Alkadur HR Primer

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

Oxydur VE-mixtures

10 °C	approx. 70 minutes
20 °C	approx. 40 minutes
25 °C	approx. 15 minutes

Waiting and curing times

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

Alkadur HR Primer

Temperature	Until further processing
10 °C	24 h
20 °C	16 h
30 °C	10 h

Oxydur VE-mixtures

Temperature	Until further processing	Maximum waiting time
10 °C	10 h	120 h
20 °C	3 h	78 h
25 °C	1.5 h	24 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.

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GISCODE

Product	GISCODE
Alkadur HR Primer	RE 1
Oxydur VE Primer	SB-STY 20
Oxydur VE Wall or floor filler	SB-STY 20
Oxydur VE Laminating-Solution	SB-STY 20
Oxydur VE Sealing	SB-STY 20
Oxydur VE Polybetone	SB-STY 20

Cleaning of Equipment

Tools soiled with uncured materials can be cleaned with STEULER UNIVERSAL CLEANER (Technical Information TI 190). Only clean in well ventilated areas.

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