

## TI 222D

Technical Information Surface Protection Linings  
Issue 16.03.2022

# OXYDUR iVE SC

Monostyrene-free, electrically conductive and highly chemically resistant levelling coating based on vinyl ester resin

## Base

Epoxy Novolac Vinyl ester resin, solvent-free

## Material Group

Floor coatings - Levelling Coating

## Description and use

**Monostyrene-free**, electrically conductive and chemically highly resistant levelling coating based on vinyl ester resin to protect concrete and steel substrates. Jointless, plain coloured and can also be used as an alternative top coat for OXYDUR iVE LC Laminate (see TI/VA 222).

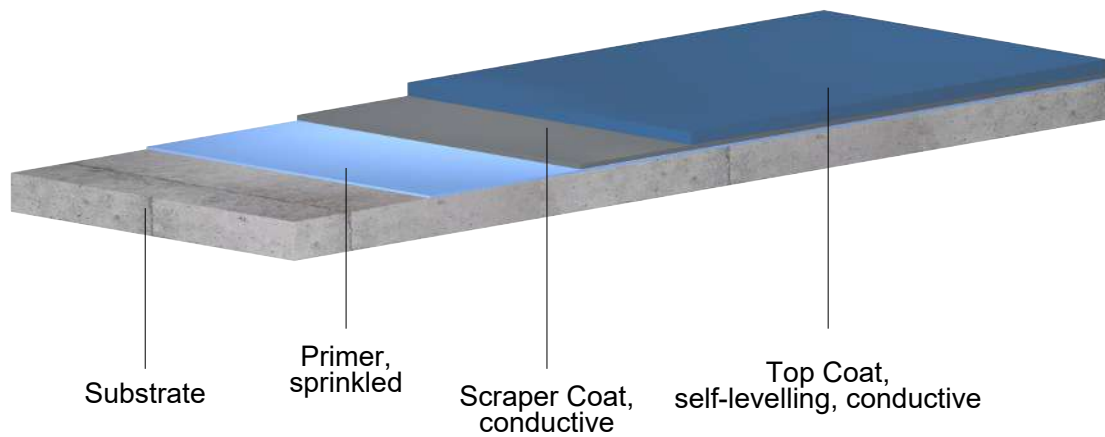
## Properties

- Temperature resistant up to 60 °C on concrete substrates
- „Total solid“ (complies with the test method of Deutsche Bauchemie)
- Can be used for electrically conductive coverings
- Fit for vehicles with pneumatic, solid rubber, Vulkollan or polyamide tyres
- Plain coloured, smooth and jointless surface

## System Design

### Concrete and steel

- Alkadur HR Primer, sprinkled
- Oxydur iVE Scraper Coat conductive
- Oxydur iVE SC Top Coat conductive
  - Layer thickness: approx. 2 mm

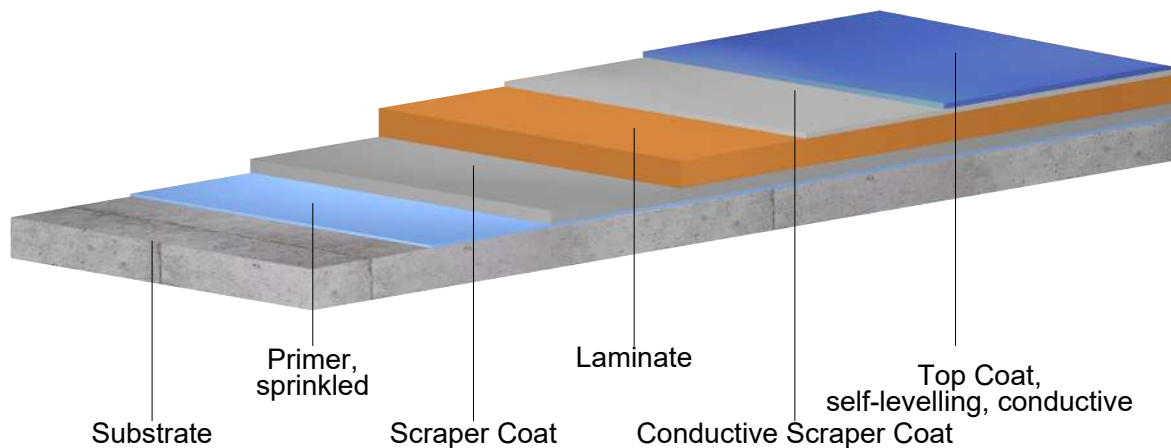


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Alternatively on

### OXYDUR iVE LC Laminate

- Oxydur iVE Conductive Scraper Coat
- Oxydur iVE SC Top Coat conductive
  - Layer thickness: approx. 2 mm



Graphic not true to scale

## Physical Data

Property [unit], Test method	Value
Density [g/cm <sup>3</sup> ], DIN EN ISO 1183-1, ASTM D 792 (Top Coat)	1.65
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579	80
Dissipation resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	≤ 10 <sup>6</sup>
Temperature resistance [°C]	60
for a short time (e.g. with high-pressure cleaners)	100
Data are mean values.	

## Chemical Resistance

- + = resistant at 20 °C
- (+) = short time resistant
- = not resistant

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## Media

Acetic acid conc.	+	Chromic acid 40 %	+	Nitric acid 65 %	+
Acetone	+	Conc. hydrochloric acid	+	Petrol	+
Alcohols (Methanole)	+	Ester / Ketones	+	Phosphoric acid. conc.	+
Aldehyde	+	Formic acid 100 %	+	Plant / animal oils and fats	+
Alkaline solutions 50 %	+	Hydrofluoric acid 40 %	+	Sulfuric acid 80 %	+
Ammonia 25 %	+	Hydrogen peroxide 50 %	+	Trichlorethylene	+
Benzene / Toluene / Xylene	+	Lactic acid	+		
Chlorine bleaching 13 % active chlorine	+	Mineral oils	+		

## Substrate

### Requirements

Application temperature	approx. 15–25 °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 / screed

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) resp. STEULER-KCH-Test-Record 007 (screed).

### Steel

Refer to DIN EN 14879-1 as well as to STEULER-KCH-Formsheet 020 and 030.

The steel surface is blasted to near white blast cleaning. A surface cleanliness of 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; minimum surface roughness Rz = 70 µm. After blasting, the formation of new rust must be prevented by suitable measures, such as priming directly.

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

### 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-Hardener	5035198001	Hobbock	25 kg	24 Months
Oxydur-iVE-Solution	5032186001	Hobbock	25 kg	24 Months
Oxydur-iVE-LF-Top-Coat-Solution grey*	5032208002	Hobbock	20 kg	24 Months
Oxydur-iVE-Accelerator 1	5032192023	Canister	2.5 kg	24 Months
Oxydur-iVE-Hardener	5032189007	PE Bottle	1 kg	12 Months
SKC-Filler 3L	5011194017	Bag	12.5 kg	24 Months
SKC-Filler 12	5011199001	Bag	25 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 kg	24 Months
Carbon-Fibre C	5019007124	Pouch	0.1 kg	24 Months
Copper strip self-adhesive	9703301015	Roll 19-20 mm wide		unlimited

\* Other colours on request.

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

## Mixing Ratio / Consumption

### Premix for an easier application

To simplify the application mix Oxydur-iVE-Accelerator 1 into each 25 kg of Oxydur-iVE-Solution. The accelerator quantities are dependent on temperature. For further processing, remove 5 kg of each of the pre-accelerated solutions.

Component	Mix	kg / mix
Oxydur-iVE-Solution	pre-dosed package (25 kg)	25.00
Oxydur-iVE-Accelerator 1	100 ml	0.10

**NOTE! The pre-accelerated solutions must be used within one day.**

### Alkadur HR Primer (on concrete/steel)

Component	l / mix	kg / mix	kg / m <sup>2</sup>
Alkadur-HR-Solution	1.6	1.80	0.161
Alkadur-HR-Hardener	1.0	1.00	0.089
<b>Total</b>		<b>2.80</b>	<b>0.250</b>

Sprinkling with SKC-Filler 16. Consumption approx. 2.0 kg/m<sup>2</sup>

Total consumption (approx.): 0.25 kg/m<sup>2</sup> Mix yields (approx.): 11.2 m<sup>2</sup>

### Oxydur iVE Scraper Coat conductive

Component	Mix	kg / mix	kg / m <sup>2</sup>
pre-accelerated Oxydur-iVE-Solution	4.5 l	5.00	0.825
Oxydur-iVE-Hardener	85 ml	0.10	0.016
SKC-Filler 3L	4.8 l	4.00	0.659
<b>Total</b>		<b>9.10</b>	<b>1.500</b>

Total consumption (approx.): 1.50 kg/m<sup>2</sup> Application steps: 1  
 Mix yields (approx.): 6.1 m<sup>2</sup>

## Oxydur iVE SC Top Coat conductive

Component	Mix	kg / mix	kg / m <sup>2</sup>
Oxydur-iVE-LF-Top-Coat-Solution	pre-dosed	20.0**	1.707
Oxydur-iVE-Accelerator 1	160 ml	0.16	0.014
Oxydur-iVE-Hardener	340 ml	0.40	0.034
Carbon-Fibre C	100 g	0.10**	0.009
SKC-Filler 12	14.0 l	18.0	1.536
<b>Total</b>		<b>38.66</b>	<b>3.300</b>

Total consumption (approx.): 3.30 kg/m<sup>2</sup>      Application steps: 1  
 Layer thickness (approx.): 2.0 mm      Mix yields (approx.): 11.7 m<sup>2</sup>

\*\* pre-dosed package.

## Pot Life

Pot life depends on temperature. The waiting time until further processing of the Oxydur-iVE-Components is included in the pot life.

### Alkadur HR Primer

Temperature	Pot life
20 °C	approx. 40 minutes

### Oxydur iVE Scraper Coat conductive

Temperature	Pot life
15 °C	approx. 90 minutes (including 15 minutes waiting time)
20 °C	approx. 70 minutes (including 10 minutes waiting time)
25 °C	approx. 60 minutes (including 5 minutes waiting time)

### Oxydur iVE SC Top Coat conductive

Temperature	Pot life
20 °C	approx. 60 minutes (including 10 minutes waiting time)

## 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
15 °C	17 h	96 h
20 °C	12 h	72 h
25 °C	8 h	72 h

The finished coating is fully mechanically and chemically resistant at 20 °C after 5 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

## 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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This issue replaces all previous versions.