

## TI 207

Technical Information Surface Protection Linings  
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# OXYDUR UP 82 EW

Seamless, flexible coating system with wide chemical resistance, suitable for fork lift traffic, particularly low-emission. National technical approval by DIBt, Berlin Z-59.12-157

## Base

Polyurethane

## Material Group

DIBt-approval – secondary containments

Floor coatings - Levelling coatings

## Description

Jointless, elastic coating system for the protection of concrete and steel substrates with a plain coloured, smooth surface. For concrete built secondary containments application according to national technical approval is possible.

## Application

Coating of concrete and screed surfaces; sealing of secondary containments which serve as structural facilities for the storage, filling and handling of water-polluting liquids.

## Properties

- Self-levelling
- Crack-bridging up to 0.4 or 0.5 mm depending on the coating thickness (according to DIBt approval)
- Smooth surface
- Plain coloured
- Jointless
- Particularly low emissions
- Temperature resistant up to 60 °C

UV-light can cause the surface of the coating to matte or discolour.

## System Design

- Priming with ALKADUR P82 (TI 136)
- Floor surfaces: Oxydur UP 82 E
- Wall surfaces: Oxydur UP 82 W
- Polyester-Fleece 80 g/m<sup>2</sup> for concave fillets
- Sealing wall areas Oxydur UP 82 EW

## Physical Data

Property [unit], Test method	Value
Density [g/cm <sup>3</sup> ], DIN EN ISO 1183-1, ASTM D 792 (floor)	1.80
Density [g/cm <sup>3</sup> ], DIN EN ISO 1183-1, ASTM D 792 (wall)	1.95
Flexural strength [MPa], DIN EN ISO 178, ASTM C 580 (floor)	8
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579 (floor)	21
Modulus of elasticity [MPa], DIN EN ISO 178, ASTM C 580 (floor)	140
Dissipation resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	> 10 <sup>10</sup>
Elongation at tear [%], DIN EN ISO 527 (floor)	10
Elongation at tear [%], DIN EN ISO 527 (wall)	25
Shore D hardness, DIN ISO 7619, ASTM D 2240	60
Tensile strength [MPa], DIN EN ISO 527 (floor)	4.5
Tensile strength [MPa], DIN EN ISO 527 (wall)	> 2
Elastic deformation [%]	95
Plastic deformation [%]	5

Data are mean values

## Chemical Resistance

For detailed information on chemical resistance, please refer to the Technical Information TI 200 and TI 200A as well as the general building approval.

## Substrate

### Requirements

Application temperature	approx. 10–35 °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.

During application, the substrate must be kept dry. No moisture (condensate, mist, etc.) must get onto the material.

### 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).

**NOTE! Only the concrete substrate is part of the DIBt approval.**

## Packaging / Shelf life

All components must be stored and transported dry. For some components special temperature limits for storage and transport apply (see note). 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-P82-Resin	5035233181	Drum	9.2 kg	24 Months
Alkadur-P82-Hardener	5035232003	Drum	5 kg	24 Months
Alkadur-P82-Additive	5035231045	Can	1.25 kg	12 Months
Oxydur-UP82-E-Solution 1 RAL1001 <sup>[1]</sup>	5034106004	Drum	6 kg	24 Months
Oxydur-UP82-E-Solution 1 RAL 7031 <sup>[1]</sup>	5034116004	Drum	6 kg	24 Months
Oxydur-UP82-Solution 2 <sup>[2]</sup>	5034134058	Can	2.4 kg	6 Months
Oxydur-BW-Powder	5011097001	Bag	25 kg	24 Months
Oxydur-E-Powder	5011101014	Bag	22 kg	24 Months
Cab-O-Sil TS720	5011016006	Bag	10 kg	24 Months
Cab-O-Sil TS720	5011016003	Bag	5 kg	24 Months
Polyester-Fleece 80 g/m <sup>2</sup>	9300900395	Roll 1.10 m wide		unlimited

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

## Mixing Ratio / Consumption

### Priming with Alkadur P 82

	Part by weight	Part by volume
Alkadur-P82-Resin	7.36	6.46
Alkadur-P82-Hardener	4.00	3.81
Alkadur-P82-Additive	1.00	0.86
Total consumption in kg/m <sup>2</sup> (approx.)	0.250	
Application steps	1	

### Floor surfaces Oxydur UP 82 E

	Part by weight	Part by volume
Oxydur-UP82-E-Solution 1	2.50	2.46
Oxydur-UP82-Solution 2	1.00	0.85
Oxydur-E-Powder	9.17	5.62
Total consumption in kg/m <sup>2</sup> (approx.)	7.200 (4.0 mm) // 9.000 (5.0 mm)	
Application steps	1	
Layer thickness approx. 4.0 mm (0.4 mm crack bridging), approx. 5.0 mm (0.5 mm crack bridging)		

### Wall surfaces Oxydur UP 82 W

	Part by weight	Part by volume
Oxydur-UP82-E-Solution 1	2.50	2.46
Oxydur-UP82-Solution 2	1.00	0.85
Oxydur-BW-Powder	8.75	5.83
Cab-O-Sil TS 720 (addition 2–4%)	0.11	2.10
Total consumption in kg/m <sup>2</sup> (approx.)	3.900 (2.0 mm) // 5.850 (3.0 mm)	
Application steps	1	
Layer thickness approx. 2.0 mm (0.4 mm crack bridging), approx. 3.0 mm (0.5 mm crack bridging)		

<sup>[1]</sup> The colours may differ slightly from the RAL colour template. Other colours on request.

<sup>[2]</sup> Frost-free storage and transport.

## Polyester-Fleece 80 g/m<sup>2</sup>

	Part by weight	Part by volume
Oxydur-UP82-E-Solution 1	2.50	2.46
Oxydur-UP82-Solution 2	1.00	0.85
Consumption Solution mixture in kg per m <sup>2</sup> Polyester-Fleece (approx.)	1.000	
Application steps	1	
Layer thickness in mm (approx.)	1.0	

## Sealing wall areas Oxydur UP 82 EW

	Part by weight	Part by volume
Oxydur-UP82-E-Solution 1	2.50	2.46
Oxydur-UP82-Solution 2	1.00	0.85
Total consumption in kg/m <sup>2</sup> (approx.)	0.220	
Application steps	1	
Layer thickness in mm (approx.)	0.2	

## Pot Life

Pot life depends on temperature.

### Alkadur P 82

Temperature	Pot life
15 °C	approx. 45 min
20 °C	approx. 30 min
30 °C	approx. 15 min

### Oxydur UP 82 layers

Temperature	Pot life
10 °C	approx. 100 min
20 °C	approx. 40 min
35 °C	approx. 15 min

## Waiting and curing times

The minimum waiting time until further processing and the maximum waiting time between application steps depend on the temperature.

### Alkadur P 82 Primer

Temperature	Until further processing (at least)
15 °C	12 h
20 °C	8 h
35 °C	6 h

The maximum waiting time between operations is 48 hours at 20 °C.

## Oxydur UP 82 layers

Temperature in °C	Until further processing (wall) in h	Up to walkability (floor) in h
10	5	24
20	3	12
35	1.5	5

The maximum waiting time between operations is 24 hours at 20 °C.

- Curing times for wall areas are not shorter than for floor areas. Supporting of the foot traffic is to be considered.
- Subsequent layers can be applied as soon as solidness caused by chemical reaction allows continuation of work.
- If the waiting times are exceeded, consultation with the Application Technology Department is necessary.

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 P 82	RE90
Oxydur UP 82 layers	PU40

## Cleaning and Maintenance

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

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This issue replaces all previous versions.