

TI 206

Technical Information Surface Protection Linings
Issue 18.09.2019

OXYDUR PTB

Jointless, elastic coating system with broad chemical resistance

Base

Polyurethane

Material Group

Sealing layer

Description

Seamless, elastic coating for the protection of concrete and steel substrates. The cured system has a uni-coloured, smooth surface.

Use

Coating of concrete or steel substrates with or without subsequent tile or brick linings.

Properties

- elastic
- jointless
- smooth surface
- if required slip resistant version possible
- plain-coloured
- thermal resistance up to 60 °C

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

Physical Data

Property (unit), Test method	Value
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792	1.06
Electrical leakage resistance [Ohm] to DIN EN 14879-3 at a relative humidity of > 70 %, ASTM F 150/98	10 ¹⁴
Elongation at tear [%], DIN EN ISO 527, ASTM C 307	70
Shore A hardness, DIN 53505, ASTM D 2240	90
Tensile Strength [MPa], DIN EN ISO 527, ASTM C 307	8
Elastic deformation [%]	95
Plastic deformation [%]	5

Data are mean values

Chemical Resistance

Please refer to the Technical Information TI 200 and TI 200A for detailed information on chemical resistance.

Substrate

Requirements

Processing 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 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).

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).

System Design

- Priming with ALKADUR P82 (TI 136)
- *If necessary* pore filling scratch coat floor
- *If necessary* filling of cavities skirting area / wall
- Polyester Fleece for corners, edges, flange etc.
- Oxydur PTB Top Coat
- *if required*, adhesive layer for subsequent tiles and bricks: OXYDUR K 425 (TI 102), sprinkled with SKC-Filler 16 (please observe the information under "Adhesive layer for subsequent tiles/bricks" in the chapter "Processing" or "Mixing ratios/consumption quantities")
- *If necessary* Sealings with OXYDUR OL (TI 104) or OXYDUR PUW (TI 110)

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-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-PTB-Solution 1 RAL 1001*	5034068004	Drum	6 kg **	24 Months
Oxydur-PTB-Solution 1 RAL 7030*	5034071004	Drum	6 kg **	24 Months
Oxydur-PTB-Solution 1 RAL 7031*	5034072004	Drum	6 kg **	24 Months
Oxydur-PTB-Solution 2	5034075058	Can	2.4 kg **	6 Months
Oxydur-PTB-E-Solution 1 RAL 1001*	5034077028	Drum	7.2 kg **	24 Months
Oxydur-PTB-E-Solution 1 RAL 7030*	5034080028	Drum	7.2 kg **	24 Months
Oxydur-PTB-E-Solution 1 RAL 7031*	5034081028	Drum	7.2 kg **	24 Months
Oxydur-BW-Powder	5011097001	Bag	25 kg	24 Months
SKC-Filler 14	5011201001	Bag	25 kg	24 Months
SKC-Filler 16	5011203001	Bag	25 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 ²	9300900842	Roll 0.15 m wide	unlimited
Polyester Fleece 80 g/m ²	9300900395	Roll 1.10 m 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 P82 Primer

Component	kg/m ²	Part by weight	kg / batch*	l / batch
Alkadur-P82-Resin	0.149	7.36	9.200**	8.070
Alkadur-P82-Hardener	0.081	4.00	5.000**	4.760
Alkadur-P82-Additive	0.020	1.00	1.250**	1.080
Total	0.250		15.450	

Total consumption in kg/m² (approx.): 0.250

Work steps: 1

Batch creates in m² (approx.): 61.8

Pore filling scratch coat floor

	Part by weight	Part by volume
Oxydur-PTB-E-Solution 1	3.0	2.97
Oxydur-PTB-Solution 2	1.0	0.81
SKC-Filler 14	4.0	2.68
Consumption per 1 mm thickness	1.600 kg/m ²	
Work steps	1	
Layer thickness	lf required	

Cavity fill coat skirting area/wall

	Part by weight	Part by volume
Oxydur-PTB-Solution 1	2.5	2.47
Oxydur-PTB-Solution 2	1.0	0.81
Oxydur-BW-Powder	8.8	5.87
Cab-O-Sil TS720	0.05	1.00
Consumption per 1 mm thickness	1.900 kg/m ²	
Work steps	1	
Layer thickness	lf required	

Polyester Fleece 80 g/m²

	Part by weight	Part by volume
Oxydur-PTB-Solution 1	2.5	2.47
Oxydur-PTB-Solution 2	1.0	0.81

One layer of fleece

Consumption: 1.1 m² Polyester Fleece 80 g/m² and 1.000 kg/m² solution by plane laying

Consumption: 1.0 m Polyester Fleece 80 g/m² and 0.150 kg/m solution by reinforcement strips 15 cm wide

Work steps: 1

Layer thickness: 1.0 mm

Two layers of fleece

Consumption: 2.2 m² Polyester Fleece 80 g/m² and 2.000 kg/m² solution by plane laying

Consumption: 2.0 m Polyester Fleece 80 g/m² and 0.300 kg/m solution by reinforcement strips 15 cm wide

Work steps: 2

Layer thickness: 2.0 mm

Oxydur PTB Top Coat

	Part by weight	Part by volume
Oxydur-PTB-Solution 1	2.5	2.47
Oxydur-PTB-Solution 2	1.0	0.81
Layer thickness	3.0 mm	
Work steps (floor)	minimum 2	
Work steps (wall)	10	
Consumption	3.180 kg/m ²	

Adhesive layer for subsequent tiles/bricks (OXYDUR K 425* + SKC-Filler 16)

	Part by weight	Part by volume
See Technical Information TI 102		
Consumption OXYDUR K 425	0.200 kg/m ²	
Work steps	1	
Spreading with SKC-Filler 16; consumption: approx. 1.500 kg/m ²		
* Not required for installation with Alkadur or Furadur mortar. May not be used for Furadur mortar!		

Slip-resistant Top Coat

	Part by weight	Part by volume
Oxydur-PTB-E-Solution 1	3.0	2.97
Oxydur-PTB-Solution 2	1.0	0.81
SKC-Filler 14	2.0	1.34
Consumption	0.600 kg/m ²	
Work steps	1	
Layer thickness	approx. 0.4 mm	

Sealing Solution with OXYDUR OL or OXYDUR PUW

OXYDUR OL

See Technical Information TI 104

OXYDUR PUW

See Technical Information TI 110

Waiting Times

The waiting times between the individual orders depend on the temperature:

Alkadur P 82 Primer

15 °C	minimum 12 h
20 °C	minimum 8 h
35 °C	minimum 6 h

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

Oxydur PTB Top Coat (Also trowellings and undercoat for subsequent tiles / bricks):

Temperature	Wall	Floor
10 °C	minimum 5 h	minimum 24 h
20 °C	minimum 3 h	at least 12h
35 °C	minimum 1.5 h	minimum 5 h

Subsequent layers can be applied as soon as solidness caused by chemical reaction allows continuation of work.

Curing times for wall areas are not shorter than for floor areas. Supporting of the foot traffic is to be considered.

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

If maximum waiting time is exceeded, consult the laboratory, application technology.

Pot Life

Pot life depends on temperature:

10 °C	approx. 60 minutes
20 °C	approx. 30 minutes
35 °C	approx. 10 minutes

Curing times

Up to walkability depending on temperature

10 °C	24 h
20 °C	12 h
35 °C	5 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 P82	RE 1
Oxydur PTB	PU 40
Oxydur K425	SB-STY 20
Oxydur OL	PU 50
Oxydur PUW	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.