

TI 209

Technical Information Surface Protection Linings
Issue 18.09.2019

OXYDUR PTB E

Jointless, flexible coating system with broad chemical resistance, suitable for fork lift traffic

Base

Polyurethane

Material Group

Floor coatings - Leveling compounds

Description and use

Seamless, elastic coating for the protection of concrete substrates that are subject to mechanical stress. The cured system has a plain-coloured, smooth surface and is suitable for fork lift traffic.

Properties

- Self-levelling (floor)
- smooth surface
- if required slip resistant version possible
- plain-coloured
- jointless
- suitable for fork lift traffic
- thermal resistance up to 60 °C

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

System Design

- Primer with ALKADUR P 82 (see Technical Information TI 136)
- *if required*, pore-filling scratch filling Floor or cavity filling Socket/wall
- Oxydur PTB E (for floor surfaces) or Oxydur PTB (for wall surfaces)
- *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")
- slip-resistant top layer (only for floors) or sealing if required: OXYDUR OL (TI 104) or OXYDUR PUW (TI 110)

Physical Data

Property (unit), Test method	Value
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792 (floor)	1.80
Density [g/cm ³], DIN EN ISO 1183-1, ASTM D 792 (wall)	1.06
Flexural strength [MPa], DIN EN ISO 178, ASTM C 580	8
Compressive strength [MPa], DIN EN ISO 604, ASTM C 579	21
Modulus of elasticity [MPa], DIN EN ISO 178, ASTM C 580	140

Property (unit), Test method	Value
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	10
Shore A hardness, DIN 53505, ASTM D 2240	95
Tensile Strength [MPa], DIN EN ISO 527, ASTM C 307	4.5
Elastic deformation [%]	95
Plastic deformation [%]	5
Data are mean values	

Chemical Resistance

Please refer to the Technical Information 200 and 200 A 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).

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-E-Powder	5011101014	Bag	22 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

* 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	

** predosed packaging

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

Work steps: 1

Batch creates in m² (approx.): 61.8

Pore filling scratch coat floor

Component	kg/m ²	Part by weight	kg / batch	l / batch
Oxydur-PTB-E-Solution 1	0.600	3.0	7.200	7.1
Oxydur-PTB-Solution 2	0.200	1.0	2.400	1.9
SKC-Filler 14	0.800	4.0	9.600	6.4
Total	1.600		19.200	

Consumption per mm thickness in kg/m² (approx.): 1.600

Work steps: 1

Layer thickness in mm (approx.): variabel

Mixture yield in m² per mm thickness (approx.): 12

Filling of cavities skirting area / wall

Component	kg/m ²	Part by weight	kg / batch	l / batch
Oxydur-PTB-Solution 1	0.385	2.5	6.000	5.9
Oxydur-PTB-Solution 2	0.154	1.0	2.400	1.9
Oxydur-BW-Powder	1.353	8.8	21.120	14.1
Cab-O-Sil TS720	0.008	0.05	0.126	2.5
Total	1.900		29.646	

Consumption per mm thickness in kg/m² (approx.): 1.900

Work steps: 1

Layer thickness in mm (approx.): variabel

Mixture yield in m² per mm thickness (approx.): 15.6

Oxydur PTB-E (floor areas)

Component	kg/m ²	Part by weight	kg / batch	l / batch
Oxydur-PTB-E-Solution 1	2.045	3.0	7.200	7.1
Oxydur-PTB-Solution 2	0.682	1.0	2.400	1.9
Oxydur-E-Powder	6.273	9.2	22.000	13.6
Total	9.000		31.600	

At processing temperatures between 10 °C and 15 °C it is recommended to add 10% less powder. The mass can go better this way.

Total consumption in kg/m² (approx.): 9.000
 Layer thickness in mm (approx.): 5.0

Work steps: 1
 Batch creates in m² (approx.): 3.5

Oxydur PTB (wall surfaces)

Component	kg/m ²	Part by weight	kg / batch	l / batch
Oxydur-PTB-Solution 1	2.272	2.5	6.000	5.9
Oxydur-PTB-Solution 2	0.908	1.0	2.400	1.9
Total	3.180		8.400	

Total consumption in kg/m² (approx.): 3.180
 Layer thickness in mm (approx.): 3

Work steps: 10
 Batch creates in m² (approx.): 2.6

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

Total consumption in kg/m² (approx.): 0.200
 May not be used for Furadur mortar!

+ 1.500 kg/m² SKC-Filler 16
 Work steps: 1

Slip-resistant Top Coat

Component	kg/m ²	Part by weight	kg / batch	l / batch
Oxydur-PTB-E-Solution 1	0.300	3.0	7.200	7.1
Oxydur-PTB-Solution 2	0.100	1.0	2.400	1.9
SKC-Filler 14	0.200	2.0	4.800	3.2
Total	0.600		14.400	

Total consumption in kg/m² (approx.): 0.600
 Layer thickness in mm (approx.): 0.4

Work steps: 1
 Batch creates in m² (approx.): 24

Sealing Solution with Oxydur OL or Oxydur PUW

OXYDUR OL see Application Instruction VA 104
 OXYDUR PUW see Application Instruction VA 110

Pot Life

Pot life depends on temperature:

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

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.

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 E	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.