

RECKLI[®] Epoxy PB

RECKLI Epoxy PB

Product 07185

Edition 01/23

modified epoxy resin

PROPERTIES

RECKLI Epoxy PB is a transparent, solvent-free two-component epoxy resin with very low viscosity. When cured, it shows high dimensional stability under heat and compressive strength.

APPLICATIONS

RECKLI Epoxy PB is used as a binder for making polymer concrete with very good mechanical properties. Its low viscosity allows high filling levels and ensures excellent processing properties. Only use oven-dry fillers, such as quartz-, chalk- or marble powder, quartz sand, gravel or lightweight fillers, for example Liapor or RECKLI Filler L.

TECHNICAL DATA

property	value	method
mixing ratio (base : hardener):	4 : 1	(according to weight)
workable temperature:	+10 °C – +30 °C	
viscosity of the mixture:	230 mPa·s	ISO 2555
pot life (200-g-mixture at +21 °C):	approx. 35 min	
full chemical and mechanical loading after:	7 – 10 days	
density:	1,1 g/cm ³	
hardness:	84 Shore D	DIN 53505
ball impression hardness:	140 N/mm ²	DIN 53456
dimensional stability under heat:	88 - 90 °C	DIN 53462
heat resistance (dry heat):	+100 °C	
appearance:	transparent	

hardening progress (at 21 °C)

period	Shore D DIN 53505	ball impression hardness DIN 53456
after 1 day	77	80 N/mm ²
after 3 days	81	128 N/mm ²
after 7 days	83	138 N/mm ²
after 7 days (+ 2 h 75 °C)	84	140 N/mm ²

These data are typical guide values. They are not destined for the generation of specifications.

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GUIDE FORMULATIONS

A liquid-tight polymer concrete with the composition:

- 1,00 kg quartz graining (0,5 – 1,0 mm)
- 1,53 kg oven-dry sand H33
- 0,02 kg pigment
- 0,36 kg RECKLI Epoxy PB

yields the following mechanical properties (after 7 days at 21 °C):

compressive strength	120 N/mm ²	DIN 53454
flexural strength	34 N/mm ²	DIN 53452
density	2,02 g/cm ³	

Values of compressive strength and flexural strength of other mixings according to DIN 53454 or, respectively, DIN 53452, can be established with the filler expected to be used by our laboratory.

SURFACE PREPARATION

For coatings or adhesions, the substrate must be stable, sound, dry, clean and free of oil, grease or wax.

PROCESSING

Add the hardener (B) to the base component (A) and mix them homogenously. Transfer the mixture into a second receptacle and stir it up again. Thereby the incorporation of larger amounts of air should be avoided. Fillers should be preferably added to the mixture rather than to the base component before mixing. Once mixed, the processing of the material must be completed within the pot life (approx. 35 minutes). Mixing larger quantities decreases the processing time.

CLEANING OF EQUIPMENT

For the cleaning of the tools and the equipment, use dry, absorbing cloths, if necessary RECKLI Epoxy Cleanser in addition. Immersion in solvents is not sufficient.

PACKAGING SIZES

pair of canisters: 5 kg;
double can: 1 kg (The hardener is enclosed in the lid.)

STORAGE

Store in a dry place at room temperature. RECKLI Epoxy PB is storable for 6 months from delivery when kept in the closed original packaging at about 18 °C. Opened drums must be closed airtight right after use.

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SPECIAL REMARKS

Storage at low temperatures may cause partial crystallisation of the base component, even if only parts of the container are exposed to cold. In this case, the material can be melted in the closed container at 40 – 50 °C. When mixed up, it is usable again.

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GENERAL INFORMATION

For further information please also see:

„General advice for the processing of RECKLI two-component resins“.

SAFETY

Protect skin and eyes from material splashes. Provide sufficient ventilation in the working place. Please consult the relevant safety data sheet and attend to the indications on the label of the package regarding the Dangerous Goods Regulation. This pamphlet is intended solely as an application directive. It does not claim to be binding and valid for all modes of application. A preliminary test under operation conditions is highly recommended.

This pamphlet replaces all previously published pamphlets concerning RECKLI Epoxy PB, stating them as no longer being valid.

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APPENDIX

CHEMICAL RESISTANCE

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In order to estimate the stability towards certain chemicals, the increase or loss of weight of a sample has been determined after prolonged immersion in the relevant medium. The data stated below refer to the assumption of chemical stability being represented by a change of weight of less than 2 % after 28 days. According to the application's characteristics, the decisive criterion might have to be set differently.

test medium	change of weight (%)		resistant
	after 7 days	after 28 days	
ammonia solution (25%)	+ 0,36	+ 0,92	yes
ammonium carbonate (5%)	+ 0,18	+ 0,56	yes
ammonium chloride (5%)	+ 0,15	+ 0,49	yes
apple juice	+ 0,23	+ 0,71	yes
brake fluid	+ 0,56	+ 1,48	yes
calcium chloride (5%)	+ 0,20	+ 0,54	yes
citric acid (5%)	+ 0,32	+ 0,67	yes
dichloromethane	decomposition		no
edible oil	+ 0,29	+ 0,43	yes
engine oil (HD oil)	+ 0,23	+ 0,25	yes
gasoline / premium-unleaded	+ 0,11	+ 0,19	yes
hydrochloric acid (10%)	+ 0,76	+ 1,74	yes
hydrochloric acid (37%)	+ 3,76	+ 9,16	no
isopropanol	- 0,06	+ 0,12	yes
orange juice	+ 0,21	+ 0,65	yes
phosphoric acid (10%)	+ 3,68	+ 8,63	no
phosphoric acid (50%)	+ 4,50	+ 10,32	no
potassium carbonate (5%)	+ 0,17	+ 0,64	yes
potassium chloride (5%)	+ 0,18	+ 0,59	yes
sodium carbonate (5%)	+ 0,13	+ 0,37	yes
sodium chloride (5%)	+ 0,18	+ 0,46	yes
sodium hydroxide (5%)	+ 0,14	+ 0,95	yes
sodium hydroxide (30%)	+ 0,01	+ 0,05	yes
sulfuric acid (10%)	+ 2,05	+ 4,95	no
sulfuric acid (38%)	+ 0,86	+ 1,65	yes
tartaric acid (5%)	+ 0,65	+ 1,39	yes
water/tap water	+ 0,20	+ 0,47	yes
white spirit	- 0,03	+/- 0,00	yes
wine vinegar (5%)	+ 3,09	+ 5,40	no
xylene	+ 0,01	+ 0,23	yes

(temperature: 21 °C; sample dimensions: 10 mm × 15 mm × 120 mm)

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