

**SOLVENT-FREE TWO COMPONENT EPOXY RESIN BASE COAT**

**DESCRIPTION**

EP 28 is an unfilled epoxy resin. Suitable as base coat, scratch coat, and levelling screed for thick layers. EP 28 offers good wettability properties, is highly fillable, and has very good processing properties. EP 28 cures very well and evenly and offers good adhesion to mineral based substrates.

**RECOMMENDED FOR**

EP 28 epoxy-resin flooring can be applied to all structurally sound concrete – new or old. Typical areas of application are:

- ▶ Base coat prior coatings
- ▶ Scratch coat for sealing and levelling
- ▶ Mortar for repair work, levelling and as bedding layer
- ▶ For installation and grouting work

**ADVANTAGES**

- ▶ “Total Solid” according to Giscode (test method of the Deutsche Bauchemie, German construction chemistry association)
- ▶ Solvent free
- ▶ Economical
- ▶ Low shrinkage
- ▶ All-purpose suitability
- ▶ Resistant to hydrolysis and saponification
- ▶ Free of deleterious substances against varnish

**TECHNICAL CHARACTERISTICS**

Characteristic	Test Result	Test Method
Viscosity (Components A+B)	600 mPa s	EN ISO 3219 at 73.4 °F (23 °C)
Density (Components A+B)	1.09 kg/lt	EN ISO 2811-2 at 68 °F (20 °C)
Color	Clean - Yellowish	
Weight loss	0.3 % after 28 days at 140 °F (60 °C)	
Water absorption	< 0.2 %	DIN 53495
Bending tensile strength (with KLB ratio 1:8)	> 15 N/mm <sup>2</sup>	DIN EN 196/1
Compressive strength (with KLB 1 in mixing ratio 1:8)	> 50 N/mm <sup>2</sup>	DIN EN 196/1
Shore-hardness D	80	DIN 53505
Adhesive tensile strength	> 1.5 N/mm <sup>2</sup>	DIN EN ISO 1542
Processing time at 50 °F (10 °C)	40 minutes	
Processing time at 68 °F (20 °C)	30 minutes	
Processing time at 86 °F (30 °C)	15 minutes	
Processing temperature	50 °F (10 °C) minimum room and floor temperature	
Curing time at 50 °F (10 °C)	16-20 hrs (Accessibility)	
Curing time at 68 °F (20 °C)	12-15 hrs (Accessibility)	
Curing time at 86 °F (30 °C)	8-12 hrs (Accessibility)	

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Curing	2-3 days for mechanical load at 68 °F (20 °C) 7 days for chemical resistance at 68 °F (20 °C)	
Subsequent coatings	During wet state of after curing, but not longer than 36 hrs.	

The aforementioned results are related to average laboratory test results. In reality the climate changes, such as temperature, moisture and surface porosity may change these results.

**DIRECTIONS FOR USE**

**Surface Preparation:** The substrate to be coated has to be levelled, dry, free of dust, has to have adequate tensile and compressive strength, and be free from weakly-bonded components or surfaces. Materials impairing adhesion, such as grease, oil, and paint residues must be removed using suitable methods. Surface suitable for coatings are concrete C20/25, cement screed CT-C35-F5, as well as other sufficiently solid substrates. The substrate has to have adequate high strength for the proposed occupational use. Coating of mastic asphalt with epoxy resin is not recommended. The surface to be coated should be prepared mechanically, preferably by shot-blasting. The surface strength must then be a minimum of 1.5 N/mm<sup>2</sup>. For concrete, moisture content must not exceed 4.5 CM-%, remaining residual humidity. The possibility of moisture ingress from the rear must be permanently excluded. The possibility of moisture ingress from the rear must be permanently excluded. Please refer to the advice issued by the trade associations, e.g. the current edition of BEB-worksheets KH-0/U and KH-0/S. Reconstructing floors may need special procedures. Obtain technical advice.

**Mixing:** Single packages of the components need to be measured in the precise mixing ratio. Combi-trading units will be supplied in the correctly measured mixing ratio. Component A has sufficient volume for the entire trading unit. Decant the hardener into the resin completely. Blend with a slow speed mixer (200 - 400 r/pm) for at least 2 - 3 minutes, for a material that is homogeneous and free of streaks. To avoid mixing errors it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again („to repot“).

**Producing scratch coats and mortar:****Scratch coats:**

1.0 kg EP 28  
0.5 - 0.8 kg KLB-Mischsand 2/1 (alternatively QUARTZ SAND MIX 0.10 – 0.45 MM)

**Epoxy resin mortar:**

1.0 kg EP 28  
8.0 - 12.0 kg KLB-Mischsand 1

Before adding additives, premix the binding agent. Then add the additive. The amount of the sand blend to be added depends on the desired texture and consistency.

**Mixing ratios:**

A:B = 100:47 parts by weight  
A:B = 100:51 parts by volume

**Application:**

**Primer:** Processing the material immediately after mixing, with a coating knife, trowel, or nylon roller. Apply an evenly closed coat on the substrate. Apply a second layer or a saturated scratch coat if the substrate is highly absorbent. Scatter the fresh surface with approx. 0.8 kg/m<sup>2</sup> quartz sand (grain size 0.3/0.8 mm) for a maximum adhesion. This is mandatory if the subsequent coatings will be applied later than 24 hours after base coat application.

**Scratch coat:** Apply a scratch coat before any further coatings to level the substrate as well as for sealing. Apply with a down spout, metal-, or rubber coating knife. Adjust the consistency to the substrate for a material that runs true.

**Epoxy resin mortar:** EP 28 is suitable as bedding layer and for repair work. The special resin EP 150 is recommended for visible industrial mortar coatings. Process immediately after mixing. Pull over a lath, compact and smooth with a trowel. Clean tools with small amounts of VR 24.

Floor and air temperature must not fall below 50 °F (10 °C) and humidity must not exceed 75 %. The difference in floor and room temperature must be less than 37.4 °F (3 °C) so the curing will not be disturbed. If a dew-point situation occurs, adhesion may malfunction, curing may be disturbed, and spotting may occur. Curing time applies to 68 °F (20 °C). Lower temperature may increase, higher temperature may decrease the curing and processing time.

**COVERAGE**

Base coat: Approx. 0.3 – 0.4 kg/m<sup>2</sup> for each applications  
Scratch coat: Approx. 0.4 – 0.6 kg/m<sup>2</sup>  
Mortar: Approx. 0.150 – 0.300 kg/m<sup>2</sup> for each mm of layer

**SPECIAL CONSIDERATIONS**

We advise against the „gumming“ of screed joints/flat joints with pure or with thixotropic agent filled epoxy resin. In the course of time, these areas will begin to show on the surface. For the application, use always the KLB-Primer resin in combination with quartz sand e.g. KLB-Mischsand 2/1 (alternatively QUARTZ SAND MIX 0.10 – 0.45 MM) or KLB-Mischsand 1). For this, we recommend to add at least 1 - 3 parts by weight of filler.

To remove fresh contamination and to clean tools, use thinners VR 24 or VR 33 immediately. Hardened material can only be removed mechanically.

The product is subject to the hazardous material, operational safety-, and transport-regulations for hazardous goods. Refer to the DIN-Safety Data Sheet and the information on the labelled containers!

GISCODE: (05/2018 modification) RE 30

Indication of VOC-Content: (EG-Regulation 2004/42), Maximum Permissible Value 500 g/l (2010,II,j/lb): Ready-for-use product contains < 500 g/l VOC.

Contact PENETRON HELLAS S.A. for additional information, regarding your project.

### PACKAGING

EP 28 is available in 6.8+3.2 kg, 20.4+9.6 kg and 401.4+188.6 kg containers.

### STORAGE / SHELF LIFE

Store in dry and frost-free conditions. Ideal storage temperature is between 50 - 68 °F (10 - 20 °C). Bring to a suitable working temperature before application. Tightly re-seal opened containers and use the content as soon as possible. When properly stored in a dry place in unopened and undamaged original packaging, shelf life is 12 months.

### SAFE HANDLING INFORMATION

Avoid skin and eye contact. If contact is made, flush areas with lots of water and seek medical advice. Protective gloves, mask and goggles should be worn. For further information please refer to Safety Data Sheet. PENETRON HELLAS S.A. has recently updated Safety Data Sheet on the safe use of PENETRON® products. Each Safety Data Sheet contains health and safety information for the protection of your employees and your customers. KEEP OUT OF REACH OF CHILDREN.

### CERTIFICATION

EP 28 has been successfully tested in combination with EP 28 Kopsiegel according to the regulations for protection and repair of concrete parts issued by German Committee for Structural Concrete, part 2, construction – planning and

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execution, August 1990: chemically resistant coating for areas with exposure to traffic and high mechanical load.



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EP28-V1-022013  
DIN EN 13813:2003-01  
Synthetic resin screed mortar  
DIN EN 13813: SR-B1.5-AR0.5-IR4  
Fire behavior: E<sub>fl</sub>-s1  
Emission of corrosive substances: SR  
Wear resistance BCA: AR 0.5  
Adhesive tensile strength B 1.5  
Impact resistance: IR 4

### WARRANTY – DISCLAIMER

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