

MOISTURE TOLERANT RAPID SETTING TWO COMPONENT EPOXY RESIN SPECIAL PRIMER

DESCRIPTION

EP 52 RAPID is a rapid-setting 2-component epoxy resin. Highly moisture tolerable. EP 52 RAPID humidifies matt damp surfaces, blocks water, and leads to excellent adhesion. It is available as an alternative product to EP 52 Spezialgrund and is adjusted with rapid curing features. The material combines good adhesion and wettability properties and allows subsequent processing within 4 - 6 hours. EP 52 RAPID is suitable for critical substrate for temperatures above 41 °F (5 °C). The product is preferably applicable for concrete and screed if a bonding course needs to be reached rapidly. Because of the medium viscosity the material is suitable for scratch coats and as a wet bonding course for bonded screed. EP 52 RAPID offers very good adhesion on sand-blasted steel.

RECOMMENDED FOR

Typical areas of application are:

- ▶ Use as base coat before coating pale-damp and chemically wet-cleaned substrate.
- ▶ Solidification of weakly based substrate.
- ▶ Rapid-setting, strong adhesion base coat.
- ▶ Scratch coat for sealing and levelling

ADVANTAGES

- ▶ "Total Solid" according to Giscode (test method of the Deutsche Bauchemie, German construction chemistry association)
- ▶ Rapid-setting
- ▶ Very high adhesion
- ▶ All-purpose
- ▶ Resistant to hydrolysis and saponification
- ▶ Cures even on damp substrates
- ▶ Free of deleterious substances against varnish

TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Viscosity (Components A+B)	950 mPa s	EN ISO 3219 at 73.4 °F (23 °C)
Density (Components A+B)	1.08 kg/lit	EN ISO 2811-2 at 68 °F (20 °C)
Color	Clean - Yellowish	
Solid content	> 99 %	KLB - Method
Weight loss	0.3 % after 28 days	
Water absorption	< 0.2 %	DIN 53495
Bending tensile strength	> 25 N/mm ²	DIN EN 196/1
Compressive strength	> 70 N/mm ²	DIN EN 196/1
Shore-hardness D	82 after 7 days	DIN 53505
Adhesive tensile strength	> 1.5 N/mm ²	DIN EN ISO 1542
Processing time at 50 °F (10 °C)	30 minutes	
Processing time at 68 °F (20 °C)	15 minutes	
Processing time at 86 °F (30 °C)	15 minutes	

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Characteristic	Test Result	Test Method
Processing temperature	41 °F (5 °C) minimum room and floor temperature	
Curing time at 50 °F (10 °C)	8-10 hrs (Accessibility)	
Curing time at 68 °F (20 °C)	4-6 hrs (Accessibility)	
Curing time at 86 °F (30 °C)	3-4 hrs (Accessibility)	
Curing	1-2 days for mechanical load at 68 °F (20 °C) 7 days for chemical resistance at 68 °F (20 °C)	
Further coatings	While still wet or after curing (4-6 hours), but not than 24 hours at 68 °F (20 °C)	

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. Suitable surfaces are concrete C20/25 (B 25), cement screed CT-C35-F5 (ZE 30), as well as other adequately sound surfaces. The substrate has to have adequately 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/mm². 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. Under certain circumstances EP 52 RAPID may be applied on damp (up to approx. 6.5 CM-%) substrate. For application on substrate with increased dampness a double layer of primer is required. If necessary, get advice from technical support. 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 report“).

Producing scratch coats and mortar:

Scratch coats:

1.0 kg EP 52 RAPID
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 52 RAPID
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 = 100:50 parts by weight
A:B = 100:55 parts by volume

Application:

Base coat: Processing the material as a base coat takes place immediately after mixing, using a coating knife, trowel, or nylon roller. Apply an evenly closed coat on the substrate. On highly absorbent surfaces a second coat or a saturated scratch coat is recommended to achieve a compact surface. For optimum adhesion scatter the fresh surface with approx. 0.8 kg/m² quartz sand (grain size 0.3/0.8 mm). This is mandatory, if the subsequent coatings will be applied later than 24 hours after base coat application. The first coating must not be scattered if substrate with an increased dampness is primed twice.

Scratch coat: For smoothing the substrate, as well as pore sealing, apply a scratch coat. Use a trowel, metal-, or rubber coating knife. The consistency has to be adjusted according to the absorbency of the substrate, and set so the material may run true.

Floor and air-temperature must not fall below 50 °F (10 °C) and/or 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.

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COVERAGE

Base coat: Approx. 0.3 – 0.4 kg/m²
 Scratch coat: Approx. 0.4 – 0.6 kg/m²

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 (EP 30 or EP 55) 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 55

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 52 RAPID is available in 6.6+3.4 kg and 20+10 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



KLB Kötztal Lacke + Beschichtungen GmbH
 Günstalstraße 25
 FRG-89335 Ichenhausen
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 EP52 RAPID-V1-022013
 DIN EN 13813:2003-01
 Synthetic resin screed mortar
 DIN EN 13813: SR-B1.5-AR0.5-IR5
 Fire behavior: E₁-s1
 Emission of corrosive substances: SR
 Wear resistance BCA: AR 0.5
 Adhesive tensile strength B 1.5
 Impact resistance: IR 5

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