HIGH-QUALITY TWO-COMPONENT EPOXY RESIN FOR DECORATIVE AND INDUSTRIAL MORTAR COATINGS

DESCRIPTION

EP 150 is a low-viscosity epoxy resin for decorative reaction resin coatings with coloured and natural sand. EP 150 is an easy to apply mortar system. Due to its special composition, the resin has low yellowing properties and is especially suitable for decorative mortar coatings. Additionally, it may be used for basecoats, levelling coats and scratch- coats

Epoxy resin mortars can usually be mixed in the ratio 1:6 up to 1:12 with quartz sand. The mechanically mixed mortar is easy to spread and smooth. The coating is usually applied manually, but it may also be applied mechanically with a power float. (For suitable sand mixes, please contact to technical department, for your own sand mix, conduct a trial).

EP 150 is a slow-setting resin and offers a sufficiently long processing time for mortar applications. EP 150 offers a balanced curing time compared to other products. Processing may be continued even after 1 day if processing temperatures are being complied with. The final product is hard but not brittle and therefore ideal as bonding mortar. The resin offers good resistance to chemicals, especially to aqueous liquid salt solutions, acids and alkalis, as well as solvents. Conditionally resistant to organic acids. Short- term resistance to damp heat up to 176 °F (80 °C), dry heat up to approx. 248 °F (120 °C). EP 150 offers good colour tone stability, like all other resins the material is not resistant to yellowing though. To increase surface properties mortar coatings need to be treated with top coats. According to mortar composition and requirements, one or more coats may be required. Suitable are EP 175 Special, EP 179, EP 705 E and EP 860.

RECOMMENDED FOR

Typical areas of application are:

- Manually and mechanically applied levelled mortar
- coatings in a thickness range of 5 - 15 mm.
- Mortar coatings made of natural and decorative sand.
- Levelling coats, mortar underlayments and basecoats
- prior to installation of epoxy-resin mortar
- Base-coats underneath mortar coatings.

ADVANTAGES

- “Total Solid” according to Giscode (test method of the Deutsche Bauchemie, German construction
- chemistry association)
- High-quality formula
- Solvent free
- Especial suitable for decorative coatings
- Good interlayer adhesion
- All-purpose and reliable
- Especial suitable for manual application
- Only slightly yellowing
- Free of deleterious substances against varnish

PENETRON ADVANCED WATERPROOFING & PROTECTION SYSTEMS

TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Viscosit (Components A+B)	400 mPa s	EN ISO 3219 at 73.4 oF (23 oC)
Density (Components A+B)	1.08 kg/lt	EN ISO 2811-2 at 68 oF (20 oC)
Color	Clean - Yellowish	
Solid content	100%	KLB - Method
Weight loss	0.3 % after 28 days	
Water absorption	< 0.2 %	DIN 53495
Bending tensile strength	35 N/mm2	DIN EN 196/1
Compressive strength	80 N/mm2	DIN EN 196/1
Shore-hardness D	80 after 7 days	DIN 53505
Adhesive tensile strength	> 1.5 N/mm2	DIN EN ISO 1542
Processing time at 50 oF (10 oC)	75 minutes	
Processing time at 68 oF (20 oC)	45 minutes	
Processing time at 86 oF (30 oC)	25 minutes	
Processing temperature	50 oF (10 oC) minimum room and floor temperature	
Curing time at 50 oF (10 oC)	20-24 hrs (Accessibility)	
Curing time at 68 oF (20 oC)	10 -13 hrs (Accessibility)	
Curing time at 86 oF (30 oC)	8-10 hrs (Accessibility)	
Curing	2-3 days for mechanical load at 68 oF (20 oC 7 days for chemical resistance at 68 °F (20 oC)	
Further coatings	After curing, but not longer than 48 hours at 68 oF (20 oC)	

**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 (B25), 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 preparedmechanically, 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. 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. With machine finished application the substrate has to be sufficiently levelled and primed. Use EP 150 or another KLBbase coat for priming. Scatter the base coat with quartz sand grain size 1 to 2 mm.

Mixing: Single packages of the components need to be measured in the precise mixing ratio. Combi-trading units will be sup- plied 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.

Producing mortars: Mixing synthetic resin mortars, in order to achieve a consistent mortar quality, should generally be carried out with a compulsory mixer. Premix additives briefly, then add the mixedr resin whilst the mixer is running.

Important: Note for consistent mixing time. Then process the complete mixture.

Scratch coats:

1.0 kg EP 150

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 150

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

Application:

The mortar mixture should always be processed immediately to avoid any changes in consistency due to the reaction process. Results in very even surfaces. Material that is already reacting is more difficult to process and may lead to altered surface structures and visible process transitions. Apply the material in portions on the substrate and distribute evenly, e.g. with a gauge. Compact and smooth manually or mechanically. Always work “fresh-in-fresh” to avoid any shoulders. Working areas must be separated in accordance with the installation process. The mortar installation requires an experienced and trained staff. Mortar coatings should generally be sealed. The number of coats and choice of material depends on the finish requirements and the mortar system.

Floor and air-temperature must not fall below 50 °F (10 °C) and/or humidity must not exceed 75 %. The difference in floorand 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.

If working conditions are not complied with, deviations in the described properties (surface and resistance) may oc- cur in the end product.

COVERAGE

Base coat: Approx. 0.250 – 0.350 kg/m2

Mortar coating:

Mixing ratio: 1:8 Approx. 1.35 kg/m2 for 6 mm layer

Mixing ratio: 1:10 Approx. 1.10 kg/m2 for 6 mm layer

Mixing ratio: 1:12 Approx. 1.00 kg/m2 for 6 mm 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 KLBMischsand 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-foruse product contains < 500 g/l VOC.

Contact PENETRON. for additional information, regarding your project.

PACKAGING

EP 150 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 oF (10 - 20 oC). Bring to a suitable working temperature before application. Tightly reseal 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 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

Classification of the fire behaviour according DIN EN 13501-01:2010-01: Bfl-s1.
Please ask for the tested system structure!

WARRANTY – DICLAIMER

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EP30-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar
DIN EN 13813: SR-B1.5-AR0.5-IR5
Fire behavior: Efl-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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