

SEMI GLOSS COLOURED TWO COMPONENT EPOXY RESIN SEALER
CERTIFIED AS SURFACE PROTECTION SYSTEM OS 4 IN ACCORDANCE WITH DAfStb GUIDLINE

DESCRIPTION

EP 740 E is a 2-component, water-emulsified, pigmented epoxy resin sealer. EP 740 E is especially suitable as sealer on concrete, cement screed, magnesia, and mastic asphalt, as well as for the reconstruction of older areas, due to its excellent adhesion on different, even older substrates. The product may be easily processed with a roller, offers high coverage, and due to its consistency the product is pleasant to work with and environmentally sound. The application in 2 layers results in a durable and optically appealing sealing coat. The product cures by drying and chemical cross-linking to a durable, robust film with good adhesion. EP 740 E results in a hard and tough, almost abrasion resistant film, physiologically harmless with good resistance to aqueous solutions, diluted acids and bases, as well as motor oil and fuel oil. The water vapor permeability allows the sealing of substrate sensitive to water as well as excessively damp substrate. EP 740 E results in semi-gloss surfaces. EP 740 E is certified according to the "Indoor Air Comfort Gold" and meets the requirements for a sustainable construction certification according to DGNB (Germany), LEED (United States) or BREEAM (Great Britain). "Indoor Comfort Gold" fulfills the highest requirements in regards to the emission of Volatile Organic Compounds and respects not only the German limits of AgBB or ABG, but also of the emissions regulations of many other European Countries. In combination with EP 727 E, the product is DIBt®-accredited for recreation rooms. In accordance with the DAfStb (German Committee for Reinforced Concrete) guideline on the protection and maintenance of concrete structures, the product is suitable for the application of the tested car park surfaces with OS 4 coating.

RECOMMENDED FOR

- EP 740 E is used as sealer on concrete, cement-, anhydrite, and mastic asphalt screed and magnesia coatings.
- As sealer on water vapor permeable coatings like EP 785 HS.
- Sealing and thin coats for interior areas, like e.g. commercially and industrially used areas, basements, garages, storage rooms and so on.
- Re-working on older epoxy resin substrate.
- Vertical areas and walls.
- As wall coating in accordance with OS 4 system.

ADVANTAGES

- total solid" according to Giscod (test method of the Deutsche Bauchemie, German construction chemistry association)
- Convenient application
- Excellent adhesion
- Excellent covering properties
- Results in appealing surfaces
- Low odor
- Consistent surface finish
- Low emission quality
- Water vapor permeability
- Environmentally friendly

TECHNICAL CHARACTERISTICS

Characteristic	Test Result	Test Method
Viscosity (Components A+B)	1,000 mPa s	EN ISO 3219 at 73.4 °F (23 °C)
Density (Components A+B)	1.32 kg/lit	EN ISO 2811-2 at 68 °F (20 °C)
Solid content	> 63 %	KLB - Method
Flashpoint	Not flammable	DIN 51755
Diffusion resistance factor	3,100	DIN EN ISO 12572
Diffusion equiv. air layer thickness sd (0.5 mm)	1.6 m	DIN EN ISO 7783-2

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Characteristic	Test Result	Test Method
<i>Abrasion (Taber Abraser)</i>	< 70 mg	ASTM D4060
<i>Brightness (85°)</i>	20 – 30	DIN 67530
<i>Processing time at 59 °F (15 °C)</i>	80 minutes	
<i>Processing time at 68 °F (20 °C)</i>	70 minutes	
<i>Processing time at 86 °F (30 °C)</i>	40 minutes	
<i>Processing temperature</i>	59 °F (15 °C) minimum room and floor temperature	
<i>Curing time at 59 °F (15 °C)</i>	24-36 hrs (Accessibility)	
<i>Curing time at 68 °F (20 °C)</i>	18-24 hrs (Accessibility)	
<i>Curing time at 86 °F (30 °C)</i>	14-18 hrs (Accessibility)	
<i>Curing</i>	2-3 days for mechanical load at 68 °F (20 °C) 7 days for chemical resistance at 68 °F (20 °C)	
<i>Further coatings</i>	After 18 -24 hours, but not longer than 48 hours at 68 °F (20 °C)	
<i>Amount of coats</i>	Usually 2 coats	
<i>Coat thickness</i>	0.2-0.4 mm when applied in 2 layers	
<i>Colors</i>	From 10 kg quantity: RAL 7030, RAL 7032, RAL 7035, RAL 7040 From 300 kg: colors upon request	

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.

VOC – CONTENCTS

The product complies with the high requirements to low VOC – Contents, as required for sustainable construction. Therefore these values exceed by far the European Union directive 2004/42/EG (decopaint-directive).

Characteristic	Max. Value	Actual Content
<i>Directive 2004/42/EG Decopaint-directive (Component A)</i>	≤ 140 g/l	0 g/l
<i>Directive 2004/42/EG Decopaint-directive (Component B)</i>	≤ 140 g/l	1 g/l
<i>DGNB German sustainable Building Council (Components A+B)</i>	< 3 %	0.9 %
<i>Climate:active Climate protection Initiative of the Austrian Federal Ministry of Agriculture, Forestry, Environment and Water (Components A+B)</i>	< 3 %	0.9 %
<i>LEED Leadership in Energy and Environmental Design (Components A+B)</i>	< 100 g/l	11 g/l
<i>Minergie Eco® Quality standard of the "Minergie society", Switzerland (Components A+B)</i>	< 1 (<2) %	0.9 %

According to the decopaint-directive single components are used for the calculation. For the quality rating system for sustainable construction the mixture of both components in the correct mixing ratio is the determining fact

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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. 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. The surface to be coated should be prepared mechanically. Diamond grinding is especially recommended for sealing coats, resulting in a smooth surface. Shotblasting is especially suitable, requiring a scratch coat with EP 782 or EP 740 E / KLB-Mischsand 2/1 (1:2 parts by weight). Cleaning older substrates is necessary before mechanical preparation. When sealing older synthetic resin surfaces test for sufficient adhesion. Conduct a trial, if in doubt.

Mixing: Combi-trading units will be supplied in the correctly measured mixing ratio. Component B has sufficient volume for the entire trading unit. Decant component A into the hardener compound. 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. If water will be added, mix components A + B completely first. Then add water and homogenize once again completely. To avoid mixing errors, it is recommended to empty the resin/hardener-mixture into a clean container and mix briefly once again. Stir up the single components for partial withdrawals and weigh for the exact mixing ratio. Processing time max. 70 minutes at 68 °F (20 °C), see chart "Processing time".

NOTE: End of pot-life is not visible!

Mixing ratios:

A:B = 1:5 parts by weight
A:B = 1:4.15 parts by volume

Application: As with all reactive resins the mixture should be processed immediately. Apply with a lint-free velour-sealing-roller and stripping grate. Divide working areas before starting work to avoid multiple applications and shoulders. It is recommended that larger areas will be processed by at least 2 people. One or more workers should apply the material in one direction and another person distributes the fresh sealing material crossways (in a 90° angle). A 50 cm wide roller should be used on larger areas. The roller for distribution should be soaked with the material and should only be used for distribution, never for the application of the sealer. Always work „fresh-in-fresh“ and ensure an optimum distribution. Avoid ponding due to possible blooming. Floor- and air-temperature must not fall below 59 °F (15 °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. Exposure to water has to be avoided for the first 7 days. 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 may occur in the end product.

Build-up of Coat:

Top sealer

- Grind the substrate and vacuum off thoroughly.
- Highly absorbent substrate requires an additional base coat using EP 727 E, consumption approx. 0.140 - 0.160 kg/m².
- Apply the first sealing coat EP 740 E, diluted with 5 - 10 % of water, with a nylon roller.
- Apply the second sealing coat EP 740 E with a nylon roller using criss-cross strokes.

Wall coating in accordance with RILI SIB OS 4

- Grind the substrate and vacuum off thoroughly.
- Where necessary, moisten the surface with a brush to improve the processing conditions on highly absorbing substrates
- To obtain an even substrate, apply a scratch coat composed of EP 740 E and KLB 2/1, mixing ratio 1:2, consumption approx. 0.5 - 0.7 kg/m².
- Double application on big cement voids or cracks and, if necessary, fill with more KLB 2/1.
- Apply the first EP 740 E top sealer layer with a nylon roller, consumption approx. 0.15 - 0.20 kg/m².
- Apply the second EP 740 E top sealer layer with a nylon roller in criss-cross strokes, consumption approx. 0.15 - 0.20 kg/m².

Important remarks:

- For OS 4 systems, minimum top sealer layer thickness of 80 µm has to be complied with in accordance with RILI SIB.
- For other requirements, please refer to the maintenance guidelines.

Suitable Coatings:

The following self-levelling coatings can be sealed with EP 740 E:

EP 200 VF, EP 202, EP 213, EP 213 RAPID, EP 216 Universal, EP 216 RAPID, EP 220, PU 405, PU 410, PU 420, PU 421, PU 425 Comfort.

With other coatings adhesion must be tested. The surface adhesion can anyway be improved by grinding.

COVERAGE

Top sealer: Approx. 0.200 – 0.250 kg/m² for each layer
OS 4 scratch coat: Approx. 0.500 - 0.700 kg/m² for each layer
OS 4 top sealer: Approx. 0.150 - 0.200 kg/m² for each layer

SPECIAL CONSIDERATIONS

To clean tools and fresh contamination, use water immediately. Hardened material can only be removed mechanically.

For cleaning note the recommendations for care and maintenance. For the warranty of interlayer adhesion do not apply any KLB-Floor care products on aqueous sealers within the first 7 days at 68 °F (20 °C).

In special cases, especially with vibrant colours, the cleaning might cause a loss of color. This can be avoided by laying an additional transparent sealing, e.g. EP 705 E. If necessary, ask for a consultancy.

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 20

Indication of VOC-Content: (EG-Regulation 2004/42), Maximum Permissible Value 140 g/l (2010,II,j/lb): Ready-for-use product contains < 140 g/l VOC.

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

PACKAGING

EP 740 E is available in 10 kg and 25 kg containers (A+B).

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. Protect from frost!

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

Slip resistance grade R10 possible, according to DIN 51130 and BGR 181.

Certified low-emission according to "Eurofins Indoor Air Comfort Gold".

Compliant with AgBB and DIBt®-accredited for recreation rooms.

Water vapor permeability, according to DIN EN ISO 7783-2. Please ask for the tested system structure.

Classification of the fire behaviour according to DIN EN 13501-01: 2010-01: Bfl-S1.



KLB Kötztal Lacke + Beschichtungen GmbH
Günztalstraße 25
FRG-89335 Ichenhausen
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EP740E-V1-022013
DIN EN 13813:2003-01
Synthetic resin screed mortar
DIN EN 13813: SR-B1.5-AR0.5-IR5
Fire behavior: Bfl-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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KLB Kötztal Lacke + Beschichtungen GmbH
Günztalstraße 25
FRG-89335 Ichenhausen
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EP740E-V1-022013
DIN EN 1504-2:2004
Surface protection products coating
DIN EN 1504-2:ZA.1d, ZA.1f, ZA.1g
Abrasion resistance: complied with
CO₂-permeability: SD > 50 m
Water vapour permeability: Class II
Capillary water absorption and water permeability: < 0.1
kg/m²*h*0.5
Resistance to increased chemical excavation: complied with
Impact resistance: Class I
Tear-test for adhesive strength evaluation: > 1.5 N/mm²
Fire behavior: Bfl-s1

WARRANTY – DISCLAIMER

PENETRON HELLAS S.A. warrants that its products are manufactured under certified ISO Standard procedures, are of excellent quality and shall be free from material defects and contain all components in their proper proportion. Should any of the products be proven defective, the liability to PENETRON HELLAS S.A. shall be limited to replacement of the material proven to be defective, since the standard application procedures have been met and the suitability of the product for the particular application have been proven. PENETRON HELLAS S.A. makes no warranty as to merchantability of fitness for a particular purpose. User, after contacting the distributor of the product, shall determine the suitability of the product for his intended use and assume all risks and liability in connection therewith. While every care has been taken, the information provided in this product's data sheet make no part of any contract. All recommendations, technical data and test data contained in this product's data sheet are based upon the results of control laboratory tests or in actual field tests. However, PENETRON HELLAS S.A. makes no warranty of any kind, concerning this data. In any case, this data are given in good faith based in the PENETRON HELLAS S.A. experience, till the publication of this sheet. Due to variance in storage, handling and applications of the materials, PENETRON HELLAS S.A. accepts no liability for the results obtained. It is suggested that potential users try small applications to determine the suitability of each individual product for their specific requirements. The users should always refer to the most recent edition of the

PRODUCT DATA SHEET

product's data sheet. PENETRON HELLAS S.A. may particularly differentiate its versions of the product's data sheet compared with those of PENETRON INTERNATIONAL LTD or respective PENETRON companies worldwide. These changes are due to text formatting, different application weathering and procedures or different product names and aim at the optimal consumer information.