

Technical Data Sheet

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- Properties:** AKEPOX® 1005 is a very fluid, two-component, epoxy resin system with a modified amine hardener which is used for firmly closing cracks and pores. The product is characterized by the following properties:
- hardens relatively quickly
 - has highly penetrative properties on account of its low viscosity
 - clear transparent, best suitable for light natural stone
 - free of solvents
 - weather-resistant
 - excellent grinding and polishing properties
 - increases the firmness and improves the quality of natural stone surfaces
 - increases the yield and the productivity
 - when properly applied, the hardened product is classified as harmless to health for bondings of natural and artificial stone upon contact with food
- Application Area:** AKEPOX® 1005 is mainly used in the stone processing industry for strengthening porous and fissured natural stone slabs, concrete and concrete ashlar and improving their surface qualities. In combination with spun glass fabrics it is also used for strengthening brittle natural stone slabs. The hardened product shows a minimal tendency to yellow if exposed to ultraviolet light or to warmth.
- Instructions for Use:**
1. The stone slabs which are to be treated must be pre-calibrated according to their nominal thickness and must be clean and dry.
 2. If the surface of the stone is pre-warmed (60°C to 70°C), the penetrative capacity of the product will be increased considerably.
 3. Four parts by weight of Component A are to be thoroughly mixed with one part by weight of Component B (e.g. 100 g and 25 g) until the mixture is free of streaks. Alternatively, seven parts by volume of Component A are to be mixed with two parts by volume of Component B (e.g. 175 ml and 50 ml); large amounts can be worked more easily with a dosing and mixing apparatus for AKEPOX® products.
 4. AKEPOX® Colouring Concentrates or Stone Ink can be used for colouring if required (max. 5%).
 5. The mixture remains workable for approx. 20 - 30 minutes at 20°C and is applied to the complete surface with a fine-toothed spreader; apply more than once in the event of larger fissures or areas of greater absorption. Cracks which are running completely through the stone are to be closed on the back before application of AKEPOX® 1005.
 6. The surfaces can be ground and polished after approx. 24 hours at room temperature. Pre-warmed natural stone slabs can be polished and grind after approx. 3 hours at 60°C and subsequent cooling.
 7. The contact pressure of the grinding and polishing segments should be 1 to 1.5 bar at the most.
 8. Tools can be cleaned with AKEMI® Universal Thinner.
 9. Warmth accelerates and cold retards the hardening process.
 10. For proper waste disposal, the container must be completely emptied.

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Special Notes:

- The optimal mechanical and chemical properties can only be attained by adhering to the exact mixing proportions; excess adhesive or hardener has the effect of a plasticizer or may cause discolouration in the marginal zones.
- The colour of the treated surfaces may deepen to a greater or lesser extent depending upon the type of stone involved; a deepening of colour may be more noticeable in the fissured area. Therefore we recommend to test on a sample area.
- Use separate vessels when removing component A and B from the storage containers.
- The resin is no longer to be used if it has already thickened or is jellying.
- The best surfaces can only be achieved by using high-quality grinding and polishing segments.
- The product is not to be used at temperatures below 15°C because it will not sufficiently harden.
- The hardened resin can no longer be removed by means of solvents. This can only be achieved mechanically or by applying higher temperatures (> 200°C).

Technical Data:

Colour:	light transparent
Density:	comp. A: 1.13 g/cm ³ comp. B: 1.00 g/cm ³
Consumption:	approx. 100 - 200 g/m ²
Working time:	
a) at varying temperatures and a quantity of 125 g:	15°C: 30 - 35 minutes 20°C: 20 - 25 minutes 30°C: 5 - 10 minutes 40°C: 3 - 5 minutes
b) at 20°C and varying amounts:	25 g: 25 - 30 minutes 125 g: 20 - 25 minutes 1250 g: 15 - 20 minutes
Hardening times for stone slabs which have been pre-warmed to the given temperatures:	20°C: 24 hours 30°C: 12 hours 40°C: 6 hours 50°C: 4 hours 60°C: 3 hours
Mechanical properties:	
Bending strength:	60 - 70 N/mm ²
Tensile strength:	35 - 40 N/mm ²

Storage:

If stored in dry and cool condition (5-25°C/41-77°F) in its closed original container at least 24 months from production.

Health & Safety:

Read Safety Data Sheet before handling or using this product.

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Important Notice:

The above information is based on the latest stage of development and application technology. Due to a multiplicity of different influencing factors, this information – as well as other oral or written technical advises – must be considered as non-binding hints. The user is obliged in each particular case to conduct performance tests, including but not limited to trials of the product, in an inconspicuous area or fabrication of a sample piece.