

## Technical Data Sheet

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**Properties:** AKEPOX® 1004 is a very fluid, two-component, epoxy resin system with a modified amine hardener which is used for firmly closing cracks and pores. AKEPOX® 1004 is characterized by the following properties:

- hardens relatively quickly
- has highly penetrative properties on account of its low viscosity
- clear transparent, best suitable for dark and multi-coloured natural stones
- 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
- classification according to the Berufsgenossenschaft der Bauwirtschaft (Accident Prevention and Insurance Association of the German Building Industry): GISCODE: RE 01

**Application Area:** AKEPOX® 1004 is mainly used in the stone-working 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 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.
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. 15-20 minutes at 20°C and is applied to the whole 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® 1004.
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 Dilution.
9. Warmth accelerates and cold retards the hardening process.
10. Empty the container fully before disposing of it.

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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.
- 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 piece.
- Use separate vessels when component A and B are being extracted from their 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.
- Slight moist film on the surface after hardening at room temperature; his water-soluble film vanishes during the grinding and polishing process.
- 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).
- If the resin has been correctly worked it presents no hazard to health when the hardening process is completed.

### Technical Data:

Colour:	light transparent	
Density:	comp. A: 1.13 g/cm <sup>3</sup> comp. B: 1.00 g/cm <sup>3</sup>	
Consumption:	approx. 100 – 200 g/m <sup>2</sup>	
Working time:		
a) at varying temperatures and a quantity of 125 g:	15°C:	25 – 30 minutes
	20°C:	15 – 20 minutes
	30°C:	5 – 10 minutes
	40°C:	3 - 5 minutes
b) at 20°C and varying amounts:	25 g:	20 – 25 minutes
	125 g:	15 - 20 minutes
	1250 g:	10 – 15 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 <sup>2</sup>	
Tensile strength:	35 – 40 N/mm <sup>2</sup>	

### Storage:

2 years approx. under cool conditions in the firmly closed original container.

### Health & Safety:

Read Material 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 trails of the product, in an inconspicuous area or fabrication of a sample piece.