Technical Instruction Sheet

Properties:

AKEPOX® 1004 is a very fluid, two-component, epoxy resin system with a modified amine hardener which is used for firmly closing filling cracks and larger pores. AKEPOX®® 1004 has the following special properties:

- hardens relatively quickly
- has highly penetrative properties on account of its low viscosity
- clear transparent, best suitable for dark and multi-coloured stone
- transparent and pale, i.e. also suitable for natural stone of light colour
- solvent-free
- weather resistant
- excellent grinding and polishing properties
- increases the firmness and improves the quality of natural stone surfaces
- increases the yield and the productivity

Application areas:

AKEPOX® 1004 is mainly used in the stone-working industry for strengthening porous and fissured natural stone slabs, concrete and concrete Ashley 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® colour pastes 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 shall 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 ground 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. Empty the container fully before disposing of it.

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Special notices:

- 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 ore on a place which isn´t noticeable.
- When you are working with AKEPOX® 1004 you should use AKEMI liquid glove in order to protect your hands.
- When component A and B are being extracted from their containers you must use separate vessels.
- 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 under 15° C because it will not sufficiently harden.
- Slight moist film on the surface after hardening at room temperature; this water-soluble film vanishes during 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 specifications:

colour:	transparent, pale
density:	Component A: 1.13 g/cm³
	Component B: 1.00 g/cm³
amounts required:	approx. 100 - 200 g/m²

working time:

a) at varying temperatures and 150 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 – 70N/mm²
Tensile strength	: 35 – 40N/mm²

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	Shelf life:	approx. 1 year under cool conditions in the firmly closed original container.

Safety notices: Please refer to the EC safety data-sheet

Notice: The above specifications were made in accordance with the present-day stage in development and the application technology research of our firm. Because the ways and means of application are beyond our control, the manufacturer cannot be made liable for the contents of this specification sheet.

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