Technical Instruction Sheet

Characteristics:

AKEPOX® 1000 is a very fluid, two-component, epoxy resin system with a modified amine hardener which is used for firmly closing fine fissures and pores. We recommend AKEPOX® 1005 in the event of larger pores and cracks.
AKEPOX® 1000 has the following special properties:

- can be worked for a long period of time
- has highly penetrative properties on account of its low viscosity
- 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® 1000 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 only 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.
3. Two parts by weight of Component A are to be thoroughly mixed with one part by weight of Component B (e.g. 100 g and 50 g) until the mixture is free of streaks. Alternatively, seven parts by volume of Component A are to be mixed with four parts by volume of Component B (e.g. 175 ml and 100 ml); Akepox colour pastes can be used for colouring if required (max. 5 %). Large amounts can be worked more easily with a dosing and mixing apparatus for Akepox products.
4. The mixture remains workable for approx. 50-60 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.
5. The surfaces can be ground and polished after approx. 2 days at room temperature. Pre-warmed natural stone slabs can be polished and ground after approx. 4 hours at60° C and subsequent cooling.
6. The contact pressure of the grinding and polishing segments should be 1 to 1.5 bar at the most.
7. Tools can be cleaned with Akemi universal thinners.
8. Warmth accelerates and cold retards the hardening process.
9. Empty the container fully before disposing of it.

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.
- When you are working with AKEPOX® 1000 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 jellifying.
- 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.

- 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: 1.15 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:	70 - 80 minutes
	20° C:	50 - 60 minutes
	30° C:	25 - 35 minutes
	40° C:	10 - 15 minutes
b) at 20° C and varying amounts:	30 g:	70 - 80 minutes
	150 g:	50 - 60 minutes
	1500 g:	40 - 50 minutes

hardening times for stone slabs which have been pre-warmed to the given temperatures:

20° C:	2	days
30° C:	1	day
40° C:	12	hours
50° C:	6	hours
60° C:	4	hours

Mechanical properties

Bending strength	: 60 – 70N/mm²
Tensile strength	: 35 – 40N/mm²
E-module	: 3000 – 3500N/mm²

6. 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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