Technical Data Sheet

Properties:

AKEMI® Diamond Clear Liquid and Diamond Clear Gel are liquid or gel-like 2-component products based on unsaturated polyester resins dissolved in styrene.

The products are characterized by the following properties:
- wide field of application due to different consistencies
- good working properties (grinding, milling, drilling)
- excellently polishable
- resistant to water, petrol and mineral oils

Application Area:

AKEMI® Diamond Clear are mainly used in the stone industry for filling and bonding natural stone. Due to the gel-like consistency, Diamond Clear Gel is suited to fill small and middle-size holes and to bond horizontal and vertical surfaces. AKEMI® Diamond Clear Gel and Diamond Clear Liquid do not contain any colour pigments and can thus easily be coloured to any shade required by adding AKEMI® Polyester Colouring Pastes, Colouring Concentrates or Spectrum Pastes.

Instructions for use:

1. The surface to be treated must be clean, completely dry and roughened.
2. Colouring is possible by adding AKEMI® Polyester Colouring Pastes, Colouring Concentrates or Spectrum Pastes up to max. 5%. Dilution is possible by adding AKEMI® Thinner S up to 8%.
3. Add 1 to 3 g of AKEMI® Hardener B liquid to 100 g of material.
4. Mix both components thoroughly. The mixture can be worked for approx. 20 - 60 minutes.
5. After 24 hours, the treated parts can be further processed (grinding, milling, drilling).
6. The hardening process is accelerated by heat and delayed by cold.
7. Tools can be cleaned with AKEMI® Nitro-Thinner.

Special Notes:

- For professional use only.
- Use AKEMI® Liquid Glove to protect your hands.
- Hardener portions higher than 3% reduce adhesion and deteriorate surface drying.
- Hardener portions less than 1% and low temperatures (< 5°C) considerably delay hardening.
- The bonding layers should be as thin as possible (< 2 mm) due to shrinkage (approx. 2 - 3 %) caused by development of heat during the hardening process.
- AKEMI® Diamond Clear products only harden with AKEMI® Hardener B liquid.
- Only moderate adhesion on fresh, alkaline building material (e.g. concrete, concrete bricks).
- Once hardened, the product can no longer be removed by solvents. Removal is only possible mechanically or by higher temperatures (> 200°C).
- Being worked properly, the product is generally recognized as not injurious to health.
- For proper waste disposal, the container must be completely emptied.

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Colour:	Liquid: transparent Gel: milky transparent	
Density:	1.10 - 1.15 g/cm³	
Working time (min.):		
a) at 20°C	Gel	Liquid
1% of hardener:	40 - 50	50 - 60
2% of hardener:	25 - 30	25 - 30
3% of hardener:	20 - 25	20 - 25
b) with 2% of hardener		
at 20°C:	25 - 30	
at 30°C:	12 - 18	
at 40°C:	6 - 9	
Mechanical properties:		
Tensile strengh DIN EN ISO 527:	20 - 25 N/mm²	
Bending strength DIN EN ISO 178:	55 - 65 N/mm²	

Storage:

If stored in dry and cool condition (5 - 25°C/41 - 77°F) in its closed original container at least 12 months from production.

Health & Safety:

Read Safety Data Sheet before handling or using this product.

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.

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