

## Technical Instruction Sheet

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### Characteristics:

AKEMI Marble Fillers 1000 Transparent are highly liquid or knife-grade 2-component products based on unsaturated polyester resins dissolved in styrene. The products are distinguished by the following qualities:

- wide field of application due to different consistencies
- fast hardening (20 - 60 minutes)
- excellently polishable
- easy dosing and mixing by using the cartridge system
- very good adhesion on natural stones also at higher temperatures (60 - 70°C; in case of low exposure to strain: 100 - 110°C)
- resistant to water, petrol and mineral oils.

### Field of Application:

Marble Fillers 1000 Transparent are mainly used in stone processing industry for bonding natural stones, reinforcement of natural stone slabs with glass fibre products (laminating) and forming of rock substitutes with crushed rocks and sand.

Special properties:

|                           |   |
|---------------------------|---|
| Transparent:              | moderately viscous consistency                    |
| Transparent extra liquid: | low viscous consistency for bonding of letters    |
| Transparent L-Special:    | knife-grade consistency for vertical applications |

### Instructions for Use:

Products in tins

1. The surface to be treated must be clean, completely dry and slightly roughened.
2. Colouring is possible by adding AKEMI Polyester Colouring Pastes up to max 5 %. Marble Filler 1000 transparent and Marble Filler 1000 transparent L-special can be diluted with Marble Filler 1000 transparent extra liquid in any mixing ratio.
3. Add 1 to 4 g of white hardener paste to 100 g of filler (4 to 5 cm of paste pressed out of the screw tube correspond to 1 g).
4. Mix both components thoroughly. The mixture can be worked for about 3 to 16 minutes (20°C), depending on the product.
5. After 20 to 60 minutes (depending on the product) the treated parts can be further processed.
6. The hardening process is accelerated by heat and delayed by cold.
7. Tools can be cleaned with AKEMI Nitro-Dilution.

B. Product in cartridge system

- without mixing nozzle: dosing apparatus only
- with mixing nozzle: dosing and mixing apparatus at the same time

1. Thoroughly clean, dry and slightly roughen surfaces to be bonded.
2. Remove the clasp from the cartridge and put the cartridge in the gun; work the grip until material emerges from both openings; then eventually screw up the mixing nozzle.
3. For tinting the marble filler AKEMI® colouring pastes for polyester products may be added (up to 5%).
3. Both components must be thoroughly mixed when working without mixing nozzle.
4. The mixture remains workable for approx. 5-7 min (20°C/68°F). After 30-90 min (20°C/68°F) work can continue on the cured marble filler (grinding, milling, drilling).
6. The hardening process is accelerated by heat and delayed by cold.
7. Tools can be cleaned with AKEMI Nitro-Dilution.

**Special Hints:**

- Use AKEMI Liquid Glove to protect your hands.
  - Hardener portions higher than 4 % reduce adhesion and deteriorate surface drying.
  - Hardener portions less than 1 % and low temperatures (under 5°C) considerably delay hardening.
  - An adhesive which is already thickened or just gelling should not be used anymore.
  - The bonding layers should be as thin as possible (< 1 mm) due to shrinkage (approx. 5-8 %) caused by the high reactivity of the filler and development of heat during the hardening process.
  - Limited durability of bondings which are frequently exposed to humidity and frost.
  - Moderate adhesion on fresh, alkaline building materials (e.g. concrete, concrete bricks).
  - The hardened filler has a slight tendency to yellowing.
  - Once hardened, the filler can no longer be removed by solvents. Removal is only possible mechanically or by higher temperatures (> 200°C).
  - Being worked properly, the hardened filler is generally recognised as not injurious to health.
- Cartridges:
- Use AKEMI original mixing nozzle only.
  - It is recommendable to remove the mixing nozzle after use and close with the original clasp. Before screw up a new mixing nozzle make sure if material emerges from both openings.

**Safety Measures:**

see EC Safety Data Sheet

**Technical Data:**

|                             |                               |                     |                  |
|-----------------------------|-------------------------------|---------------------|------------------|
| Colour:                     | honey-yellow                  |                     |                  |
| Density:                    | 1.05 - 1.15 g/cm <sup>3</sup> |                     |                  |
| Working time / min.:        |                               |                     |                  |
| a) at 20°C                  | <u>Transparent</u>            | <u>Extra liquid</u> | <u>L-Special</u> |
| 1% of hardener:             | 12 - 14                       | 9 - 11              | 8 - 10           |
| 2% of hardener:             | 6 - 8                         | 7 - 9               | 5 - 6            |
| 3% of hardener:             | 5 - 6                         | 5 - 6               | 4 - 5            |
| 4% of hardener:             | 4 - 5                         | 4 - 5               | 3 - 4            |
| Cartridge                   |                               |                     |                  |
| b) with 2% of hardener      |                               |                     |                  |
| at 10°C:                    | 13 - 16                       | 12 - 14             | 12 - 14          |
| at 20°C:                    | 6 - 8                         | 7 - 9               | 5 - 6            |
| at 30°C:                    | 4 - 5                         | 4 - 5               | 3 - 4            |
| Mechanical Properties:      |                               |                     |                  |
| Tensile strength DIN 53455: | 40 - 50 N/mm <sup>2</sup>     |                     |                  |
| Bending strength DIN 53452: | 100 - 110 N/mm <sup>2</sup>   |                     |                  |

**Shelf life:**

1 year approx. if stored in cool place free from frost in its tightly closed original container.

**Notice:**

The above information is based on the latest stage of our 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.