

**Technical Instruction Sheet**

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- Characteristics:** AKEMI Marble Fillers 1000 Universal are liquid, creamy 2-component products based on unsaturated polyester resins dissolved in styrene, containing mineral filling agents. The products are distinguished by the following qualities:
- good working properties on horizontal surfaces due to liquid, creamy consistency
  - fast hardening (20 - 40 minutes)
  - good working properties (grinding, milling, drilling)
  - excellently polishable
  - very good adhesion on natural stones also at higher temperatures (70 - 80°C; in case of low exposure to strain: 100 - 110°C)
  - resistant to water, petrol and mineral oils.
- Field of Application:** Marble Fillers 1000 Universal are mainly used in stone processing industry for filling and bonding natural stones. Due to their liquid, creamy consistency the products are suited to fill small and middle-size holes or fissures and to bond horizontal surfaces. Special attention is called to the product Marble Filler Universal Neutral which does not contain any colour pigments and can thus easily be coloured to any shade required by adding AKEMI Polyester Colouring Pastes.
- Instructions for Use:**
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 %. Dilution is possible in any ratio by adding Marble Filler Transparent extra liquid.
  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).
  5. After 15 to 35 minutes the treated parts can be further processed and transported.
  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.
  - The bonding layers should be as thin as possible (< 2 mm) due to shrinkage (approx. 2-3 %) 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.
- Safety Measures:** see EC Safety Data Sheet

**Technical Data:** Colour: jura-yellow, neutral, standard grey, white, black,  
golden-yellow

Density: 1.70 - 1.75 g/cm<sup>3</sup>

Working time / min.:

a) at 20°C

1% of hardener: 8 - 10

2% of hardener: 5 - 6

3% of hardener: 4 - 5

4% of hardener: 3 - 4

b) with 2% of hardener

at 10°C: 10 - 12

at 20°C: 5 - 6

at 30°C: 2 - 3

Mechanical Properties:

Tensile strength DIN 53455: 20 - 30 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 trials of the product, in an inconspicuous area or fabrication of a sample piece.