Technical Data Sheet

Properties:

AKEMI® MS 76 Stone and Marble Adhesives, consistency from highly liquid up to knife-grade, are 2-component products based on unsaturated polyester resins dissolved in styrene with a special adhesion additive. The products are distinguished by the following properties:

- good working properties and application on horizontal and vertical areas due to highly liquid, liquid, still flowing, creamy or knife-grade consistency
- fast hardening (20 - 40 minutes)
- easy dosing and mixing with cartridge system
- good working properties (grinding, milling, drilling)
- very good adhesion on metal (iron, steel, aluminium), wood, stone and various plastics (e.g. rigid PVC, GFK) also at higher temperatures (up to 100°C approx.)
- resistant to water, petrol and mineral oils

Application Area:

AKEMI® MS 76 Stone and Marble Adhesive/Special Cast Resin/Rodding Bond are mainly used in the stone processing industry and trade for the bonding of natural and artificial stones, iron, steel or aluminium, wood, or plastics together or among each other. In addition MS 76 Special Cast Resin and MS 76 Rodding Bond in connection with GRP-, CFRP-steels and flat bars as a reinforcement adhesive for slot reinforcements are used for kitchen tops, tables etc. and for sealing cracks and joints in screed flooring and concrete. The products are suited for bondings which are not too highly exposed to mechanical stress indoors and conditionally outdoors up to a temperature of 60-0°C, resp. in case of bondings not exposed to mechanical stress up to temperatures of approx. 100°C. The advantage of these products is the short hardening time, yet, the bondings are not of the same high quality as those made with AKEPOX® adhesives (epoxy based).

Instructions for Use:

A: Products in tins

1. The surface to be treated must be clean, completely dry and roughened.
2. Add 1 to 3 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).
3. Mix both components thoroughly. The mixture can be worked for about 4 to 14 minutes (20°C).
4. After 20 40 minutes (20C °) the treated parts can be further processed and transported; after 1 hour bonded parts can be exposed to strain.
5. If to use MS76 Special Cast Resin as a repair resin for filling and repairing cracks in screed flooring or joints, first fill in and smooth the surface with a spatula. It may be necessary to widen the cracks beforehand or use screed repair brackets. In order to improve adhesion for additional layers of chemical products, sprinkle quartzite sand on the material before MS76 hardens.
6. Wait for 60 minutes before further floor restoration, e.g. application of adhesives or compensation fillers.
7. The hardening process is accelerated by heat and delayed by cold.
8. Tools can be cleaned with AKEMI® Nitro-Dilution.

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B. Cartridge system (MS 76 Rodding Bond highly liquid and liquid)

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

1. The surface to be treated must be clean, completely dry and roughened.
2. Remove the clasp from the cartridge and put the cartridge in the gun; work the grip until material emerges from both openings; then attach the mixing nozzle, if necessary.
3. Both components must be thoroughly mixed when working without the mixing nozzle.
4. The mixture remains workable for approx. 5-7 minutes (20°C). After approx. 20-40 minutes (20°C) the hardened product MS 76 Rodding Bond can be further processing (grinding, milling, drilling), after 1 hour bonded parts can be exposed to strain.
5. The hardening process is accelerated by heat and delayed by cold.
6. Tools can be cleaned with AKEMI® Nitro-Dilution.

Special Notes:

- 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.
- For stone floor restoration of big cracks or joints use MS76 Stone and Marble Adhesive knife-grade or paste-like.
- Discard any adhesive that is already thickened or just gelling.
- Apply adhesive immediately following grinding of metal surfaces to guarantee good adhesion.
- 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 bonding, which are frequently exposed to humidity and frost.
- Moderate adhesion on fresh, alkaline building materials (e.g. concrete, concrete bricks).
- Once hardened, solvents can no longer remove the filler. Removal is only possible mechanically or by higher temperatures (> 200°C).
- Being worked properly, the hardened filler is generally recognized as not injurious to health.

When using the cartridge system:

- Use only original AKEMI® mixing nozzles; for MS 76 Rodding Bond highly liquid: mixing nozzle 10:1 06-32, for MS 76 Rodding Bond liquid: mixing nozzle 10:1 08-18.
- It is recommendable to remove the mixing nozzle after use and to put on the clasp to the cartridge. Before using a new mixing nozzle, thoroughly control if material can emerge from both openings.

Technical Data:

Colours:

Stone and Marble Adhesive still flowing/knife-grade:	black, light grey light beige, white
Special Cast Resin:	light grey
Rodding Bond:	light grey

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Density:
Stone and Marble Adhesive still flowing/knife-grade: approx. 1.63 g/cm³
Special Cast Resin: approx. 1.36 g/cm³
Rodding Bond liquid: approx. 1.73 g/cm³
Rodding Bond highly liquid: approx. 1.37 g/cm³

Working time / min.:

a) at 20°C

	still flowing/knife-grade	liquid
1% of hardener:	8 - 10	14 - 16
2% of hardener:	5 – 6	7 - 9
3% of hardener:	4 – 5	5 - 6

b) with 2% of hardener

at 10°C:	10 - 12	12 - 14
at 20°C:	5 – 6	7 - 9
at 30°C:	3 – 4	3 - 4

c) cartridge (Rodding Bond liquid and highly liquid)

at 10°C:	10 - 12
at 20°C:	5 - 6
at 30°C:	2.5 – 3

Mechanical properties:
Tensile strength DIN 53455: 15 - 25 N/mm²
Bending strength DIN 53452: 40 - 50 N/mm²

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

Health & Safety: Read Material 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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