

Technical Data Sheet

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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 characterized 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 approx. 100°C)
- resistant to water, petrol and mineral oils

Application Area: AKEMI® MS 76 is mainly used in the stone processing industry and trade for the bonding of natural and artificial stone, 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 combination with GRP-, CFRP-steels and flat bars as a reinforcement adhesive for slot reinforcements are used for kitchen counter 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 - 70°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 (based on epoxy resins).

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 approx. 4 to 14 minutes (20°C).
4. After 20 - 40 minutes (20 C°), the treated parts can be further processed and transported; after approx. 1 hour, the bonded parts can be exposed to strain.
5. If MS 76 Special Cast Resin is used as a repair resin for filling and repairing cracks in screed flooring or joints, first fill in and smoothen 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 MS 76 hardens.
6. Further processing during screed restoration, e.g. application of adhesives or levelling compounds, after 60 minutes at the earliest.
7. The hardening process is accelerated by heat and delayed by cold.
8. 8. Tools can be cleaned with AKEMI® Nitro-Thinner.

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B. Cartridge system (MS 76 Rodding Bond highly liquid/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 processed (grinding, milling, drilling), after approx. 1 hour, the 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-Thinner.

Special Notes:

- For professional use only.
- Use afin® Liquid Glove to protect your hands.
- Hardener portions higher than 3% reduce the quality of the bonding.
- Hardener portions less than 1% and low temperatures (< 5°C) considerably delay hardening.
- For screed restoration of large fissures or joints use MS 76 knife-grade or paste-like.
- Adhesive that has already thickened or is gelling must no longer be used.
- In case of metallic surfaces, bonding should be carried out as soon as possible after sanding in order to avoid a reduction in 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 bondings which are frequently exposed to humidity and frost.
- Only 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).
- When using cartridges: use only original AKEMI mixing nozzles. 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.
- Being worked properly, the hardened filler is generally recognized as not injurious to health.
- Within the EU: Subject to the self-service prohibition regulation and shall only be sold by specialized sales outlets.
- For proper waste disposal the container must be completely emptied.
- Recycling in accordance with the guidelines of EU Decision 97/129 EC on the Packaging Directive 94/62/EC.

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1. Colours

MS 76 still flowing/knife-grade:	light grey, black, light beige
Special Cast Resin:	light grey
Rodding Bond:	light grey, black

2. Density

MS 76 still flowing/knife-grade:	approx. 1.63 g/cm ³
Special Cast Resin:	approx. 1.36 g/cm ³
Rodding Bond liquid:	approx. 1.73 g/cm ³
Rodding Bond highly liquid:	approx. 1.37 g/cm ³

3. Working time / min.:

	<u>still flowing/knife-grade</u>	<u>liquid</u>
a) At 20°C		
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	

4. Mechanical properties:

Tensile strength DIN 53455:	15 - 25 N/mm ²
Bending strength DIN 53452:	40 - 50 N/mm ²

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.