Technical Data Sheet

Properties:

AKEMI® Marble Silicone is a 1-component joint-sealing material based on silicone rubber which hardens in contact with atmospheric moisture.

The product is characterized by the following properties:
- guaranteed no discolouration in the contact area (ISO 16938)
- rational processing and smoothing properties
- mould-inhibiting properties
- practical movement absorption 20%
- skin formation time approx. 15 minutes
- temperature resistant from -50°C to +150°C
- resistant to water stress, UV- and weathering influences
- high resistance to abrasion, tearing and notching
- odourless and physiologically harmless after hardening
- colours also available in matt design
- chlorine-resistant in the disinfectant concentration for swimming pools as well as stress-resistant against mechanical cleaning methods
- emission class A+
- ISEGA-tested for use in food-related areas

Application Area:

AKEMI® Marble Silicone is a special joint-sealing material for expansion and connecting joints on natural and artificial stone which is sensitive to discolouration, e.g. marble, granite, quartzite, sandstone, limestone, terrazzo, concrete and the like. The product also has a very good adhesion on plaster, ceramics, glass, wood, many metals and plastics. AKEMI® Marble Silicone - with the exception of structure-effect and matt design colours - is also suitable for underwater areas and those exposed to permanent humidity in swimming pools, sauna, steam-baths, public showers and changing rooms as well as pressure vessel construction.

Instructions for Use:

1. Contact surfaces must be dry, clean, free of grease and dust. Cleaning with AKEMI® Cleaner A on natural and artificial stone, tiles, ceramics, glass, non-painted wood and metal; AKEMI® Cleaner I on plastics and painted surfaces.
2. To avoid adhesion on three flanks and in case of deep joints use AKEMI back-filling cords; for humid room applications as well as in outdoor and permanent wet areas use closed-cell PE back-filling cords, otherwise use open-cell PUR back-filling cords. Joint size min. 5 x 3 mm (width x depth).
3. Mask off surfaces in the area of the joint edges with AKEMI® Special Adhesive Tape.
4. Working temperature +5°C up to +35°C.
5. Apply product and smoothen within 5 - 10 minutes. Optimal smoothing is achieved with AKEMI® Smoothing Rubber and AKEMI® Smoothing Agent (except for mat design colours).
6. Remove the masking tape used before the skin is formed in the direction of the joint.
7. Hardening depends on layer thickness, temperature and relative atmospheric humidity and takes approx. 2.5 mm per 24 hours.
8. Tools can be cleaned with AKEMI® Cleaner A.

Special Notes:

- For professional use only.
- Matt-design colours must be smoothened dry in order to create the matt surface effect.

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- Discolouration occurs on tar or bitumen coated surfaces as well as on elastomers such as EPDM, APTC or neoprene.
- Test the compatibility with the sealant prior to using the product on coated surfaces (e.g. paints, lacquer coats).
- To avoid staining, do not apply the primer to visible surfaces.
- Remove excess smoothing agent to avoid staining.
- No or limited adhesion to plasticised plastics as well as on PE, PP and teflon.
- Sealing materials with fungicide additives must not be used in the construction of aquariums.
- Hardened sealant can only be removed mechanically, not hardened sealant with AKEMI® Cleaner A, depending on the surfaces.
- The hardened sealant is not dangerous to health.
- 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.

Attention in swimming pool operation:

The risk of mould formation is greatly reduced by disinfecting the swimming pool water with chlorine, whereby the water quality should be 0.3 to 0.6 mg/litre for swimming pools with a free chlorine content, 0.7 to 1.0 mg/litre for hot whirlpool pools, but no more than 1.2 mg/litre. Care should be taken to ensure regular, uninterrupted water circulation with constant rinsing of the pool edge, as otherwise mould growth is encouraged due to minimum concentrations of less than 0.3 mg/litre of chlorine. This also occurs when acidic cleaning agents are used. Please consult us with regard to setting the optimum pH value of the swimming pool water.

Technical Data:

System:	oxime cross-linked, MEKO-free
Tear resistance (ISO 34-1):	approx. 5,1 N/mm²
Specific weight (EN ISO 1183-1):	1.01 g/cm³ 1.22 g/cm³ (matt)
Shore A hardness ISO 868:	approx. 24
Permissible total deformation:	20%
Working temperature:	+ 5°C to + 35°C
Temperature resistance:	-50°C to +150°C
Skin formation time at 23°C, 50% rel. air humidity:	approx. 6 minutes
Hardening at 23°C, 50% rel. air humidity:	approx. 2.5 mm per 24 hours
Modulus (DIN EN ISO 8339):	0.46 N/mm²
Breaking stress (DIN EN ISO 8339):	0.54 N/mm²
Elongation at break (DIN EN ISO 8339):	approx. 100%

Consumption:

Joint width	Joint depth	meter per cartridge
5 mm	5 mm	12
10 mm	10 mm	3
15 mm	10 mm	2
20 mm	15 mm	1

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Adhesion and compatibility:

AKEMI® Marble Silicone has a very wide adhesion spectrum. Due to the variety of possible influences on the adhesion behaviour, it is nevertheless recommended to carry out an adhesion test before using AKEMI® Marble Silicone on surfaces with not yet known behaviour. Depending on the type and condition of the surface material as well as subsequent loads (tensile and shear forces, exposure to temperature, humidity and other media) it may be advisable - depending on corresponding test results - to improve the adhesion of the sealant to the surface by using cleaners and/or primers (e.g. AKEMI® Clean Primer AP 40 for non-absorbent surfaces, Primer AP 10 for porous respectively absorbent surfaces).

Sufficient adhesion cannot be achieved on surfaces with generally adhesion-repellent properties, such as polyolefins (e.g. PE, PP), silicone, PTFE (e.g. Teflon®), butyl rubber, neoprene, EPDM, tar-, bitumen- or wax-containing materials.

AKEMI® Marble Silicone has good compatibility with a wide range of common substrates made of metals or plastics.

The permanent compatibility between sealant and adjacent existing materials or materials intended for later contact (e.g. coating systems) or even complete functional units (glazing systems) must be ensured before the sealant is used to avoid discolouration, loss in adhesion, migration effects or other harmful consequences. Prolonged contact with materials which release migratory components (e.g. plasticisers, bitumen) must basically be avoided. AKEMI Marble Silicone is a pure silicone. It is free of acidic or alkaline components, migratable plasticisers, extenders or solvents and thus fulfills important requirements for compatibility in contact with natural stone and other sensitive materials.

Exposure to coloured or discolouring substances can lead to an optical change of the sealant. This applies in particular to substances in tobacco smoke, dyes, dirt, substances containing tar and bitumen, but also in the case of colonisation by mould.

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.

Conformity/tests:

EN 15651-1:	F20LM Ext.-Int.
EN 15651-3:	XS1
EN 15651-4:	PW20LM Ext.Int.
ISO 16938-1:	compatibility with natural stone
VOC France:	emission class A+
ISEGA :	certificate No. 64502 U 25
REACH:	compliant with regulation (EU) No. 1907/2006
IVD-leaflet 3-1:	constructive design and sealing of joints in sanitary areas and damp rooms part 1: sealing with sprayable sealants
IVD-leaflet 14:	sealants and mould infestation
IVD-leaflet 17:	connection joints in swimming pool construction
IVD-leaflet 23:	sealing of joints and connections to natural stone

Health & Safety:

Read Safety Data Sheet before handling or using this product.

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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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