

Technical Data Sheet

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- Properties:** AKEMI® Food Safe Silicone is a one-component, joint sealing material on the basis of silicone rubber which hardens in contact with atmospheric moisture. The product is characterized by the following properties:
- acetate cross-linked
 - excellent working and smoothing properties
 - effectively tolerates expansion/contraction up to 25%
 - skin formation within approx. 10 - 15 minutes
 - high resistance against abrasion, tearing and notching
 - extremely good adhesion
 - temperature resistance -40°C to +175°C
 - for drinking water and food applications
 - meets the requirements of DVGW-worksheet W270 as well as the recommendation of German Health Centre
- Application Area:** AKEMI® Food Safe Silicone is a special joint-sealing material for expansion and connecting joints for drinking water and food applications, drinking water tanks and filters, kitchens, canteen kitchens, dairy industry, butcher's shops, slaughter-houses, cold-storage depots etc. as well as for the production of aquarium.
- Instructions for Use:**
1. Contact surfaces must be dry and clean and free of fat and dust; tiles, ceramic, glass, and enamel can be cleaned with Cleaner A; Cleaner I is to be used on plastic and enameled surfaces.
 2. In order to prevent adhesion on three flanks and in the event of deeper joints AKEMI® joint cords should be used; closed-cell polyethylene (PE) joint tapes for wet/moist rooms (bathrooms, saunas etc.), for outdoors and areas exposed to permanent humidity, otherwise open-cell polyurethane (PUR) joint cords. Joint size: 3 x 5mm at the least.
 3. Areas flanking the joint should be protected with AKEMI® special adhesive masking tape.
 4. For absorbent mineral surfaces use AKEMI Primer AP 10. After approx. 1 hour AKEMI® Food Safe Silicone can be applied. Please pay careful attention to the primer table.
 5. Working temperature +5°C - +40°C (flanks must be dry).
 6. After application the silicone must be smoothed within 10 – 15 minutes. The best results are achieved with AKEMI® smoothing agent .
 7. The masking tape should be removed by pulling it in the direction of the joint before a skin starts to form.
 8. The hardening process, which is dependent upon the thickness of the layer, the temperature and the relative atmospheric humidity, takes approx. 2-3 mm per 24 hours.
 9. Tools can be cleaned with AKEMI® Cleaner A.
- Special Notes:**
- Before filling water into containers, AKEMI Food Safe Silicone should be allowed to harden for at least 4 days.
 - Test the compatibility with the sealant prior to using the product on coated surfaces (e.g. paints, lacquer coats).
 - In order to protect the hands, use AKEMI® Liquid Glove.
 - If the base surface is coated with tar or bitumen problems will arise in respect of discolouration and adhesion. The same applies for elastomers such as EPDM rubber, EPT and neoprene.

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- In order to prevent stains the primer should not come into contact with surfaces which are in the field of vision.
- Excess smoothing agent must be removed in order to avoid staining.
- When in contact with non-ferrous metal like copper or brass, discolouration can arise.
- The silicone does not adhere or adheres poorly to plastics containing softening agents, to polyethylene (PE), polypropylene (PP) and polytetraflouroethylene (teflon).
- Not suitable for sandstone, natural stone and artificial stones; danger Of discolouration in the contact zone. Use, if possible, AKEMI® Marble Silicone instead.
- Hardened sealing can only be removed mechanically. Sealing material which is still soft can be removed with Cleaner A or I – depending on the surface beneath.
- The hardened sealing presents no danger to health.

Technical Data:

System:	oxime cross-linked
Consistency:	past-like and stable
Density (DIN 53479-B) at 23°C:	1.2 g/cm ³
Shore A hardness (DIN 53505):	approx. 25
Effective tolerance of expansion/ contraction:	approx. 25%
Working temperature:	+ 5°C – + 40°C
Stable at temperatures from:	-40°C – + 175°C
Time to build up skin at 23°C and 50% relative atmospheric humidity:	approx. 10 – 15 minutes
Hardening time at 23°C and 50% relative atmospheric humidity:	approx. 2 – 3 mm per 24 hrs
Modulus of elasticity at 100% stretching:	approx. 0.5 N/mm ²
Tensile strength at break (DIN 53504):	approx. 1.35 N/mm ²
Elongation due to tearing (DIN 53504):	approx. 570%
Colour:	grey

Primer table:

	Subsurface: underwater resp. wet areas	Other
aluminium, untreated and eloxadized	AP20	AP20
concrete		AP10
glass	+	+
ceramic		+/AP10
eloxal	AP20	AP20
stainless steel	AP20	AP20
copper	-	-
brass	-	-
zinc	-	-

- + good adhesion without primer
- not usable

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Resistance to chemicals:	ethanol	+	hydrofluoric acid conc.	-
	ethyl hexanol	o	hydrochloric acid 10%	+
	glycerol	+	hydrochloric acid conc.	-
	methanol	+	sulfuric acid 30%	+
	ammonia conc.	+	sulfuric acid conc.	-
	cyclohexylamin	-	lactic acid 40%	+
	ethyl acetate	-	isooctane	-
	acetone	+	petroleum ether	-
	potassium hydroxide 10%	o	toluene	-
	sodium hydroxide 10%	o	trichloroethylene	-
	soda (saturated sol.)	+	edible fat	+
	sodium chloride (10%)	+	edible oil	+
	acetic acid 5%	+	machine oil	+
	acetic acid conc.	+		

- + resistant
- o short-term resistant
- not resistant

Storage: Can be stored for 12 months under cool and dry conditions in the original sealed 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 trials of the product, in an inconspicuous area or fabrication of a sample piece.