



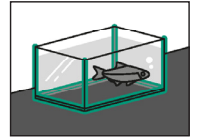
RAMSAUER®

410

LASTING BONDS.

Aquarium

1-component acetic cure silicone sealant



Technical data sheet

Version: 09-2024

Tests:

- Tested for use in the foodstuffs industry
- DIN 32622, section 4.4.2,
- corresponds to OECD guideline 236
- KTW guideline (KTW = German standard for rubber and plastic components in contact with drinking water)
- DVGW worksheet W270
- ÖNORM B5014/1 for hot and cold water
- NSF approval
- Fulfils the French VOC requirement Class A+



Nonfood Compounds
Category Code S1



1. Technical Datas

Basis	Acetic silicone sealant
Skin formation time	~ 4 Min. (23°C/50% relative humidity)
Full curing time	~2.8 mm/24 hours (at +23°C/50% relative humidity)
Density	~ 1.02 (EN ISO 1183-1)
Shore A hardness	~ 23 (DIN EN ISO 868)
Volume shrinkage	~ 2.5% (EN ISO 10563)
Tear propagation resistance	~ 7.83 N/mm (ISO 34-1)
Tensile stress at break	~ 0.66 N/mm ² (DIN EN ISO 8339)
Module	~ 0.52 N/mm ² (EN ISO 8339)
Elongation at break	~ 180% (DIN EN ISO 8339)
Resistance to high and low temperatures	-50°C to +180°C (long-term exposure)
Application temperature (substrate, environment)	Lower +5°C, upper +35°C
Admissible total deformation	25%
Colours	Transparent, black
Packaging	310ml cartridge; 600ml foil bag and industrial container at request
Shelf life of cartridges and foil bags	12 months in original packaging in cool and dry storage conditions
Shelf life of industrial container	6 months, cool and dry in sealed original container

2. Properties / application areas

410 Aquarium is resistant to fresh and salt water as well as alkaline and acidic vapors in terrariums. The material is also algae-resistant and permanently resistant to the chlorine water found in swimming pools. Short-term (duration of cleaning) resistant to commercially available cleaning and disinfecting agents. 410 Aquarium is a fast-curing, fungicide-free acetate system for the waterproof bonding of all-glass aquariums and all-glass constructions. Physiologically harmless when cured. The sealant is suitable for use in the drinking water and food sectors.



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3. Substrate preparation

The adhesion surfaces must be dry, capable of bearing, and free of dust, oil and grease. Pre-cleaning with 828 Grundreiniger is generally recommended on non-absorbent substrates, but compatibility with sensitive surfaces should be checked in advance to avoid surface damage. If required, carefully pretreat the adhesion surfaces using a suitable primer. Sanding with a fine sanding fleece can further improve adhesion on smooth surfaces. Due to the many different coating systems, an adhesion test is recommended before application to painted surfaces.

Substrate	Preparation
Glass	828 Grundreiniger
Tiles	828 Grundreiniger
Hot-dip galvanised steel	828 Grundreiniger
Stainless steel	828 Grundreiniger
Aluminium	828 Grundreiniger
Aluminium AlMg1	828 Grundreiniger
Aluminium AlCuMg1	828 Grundreiniger
Aluminium 6016	828 Grundreiniger
Anodised aluminium	828 Grundreiniger
PVC Kömadur ES	828 Grundreiniger / Primer 100
PC Makrolon Makroform 099	828 Grundreiniger
ABS Metzoplast ABS 7 H	828 Grundreiniger / Primer 100
PET	828 Grundreiniger
PU waste quality	828 Grundreiniger / Primer 100
PMMA Röhm sanitary quality	828 Grundreiniger / Primer 100

This table is based on adhesion tests with Rocholl test specimens under laboratory conditions. In practice, the adhesive properties depend on a large number of external influences (weathering, contamination, loads, etc.). Therefore, this table is for guidance only and does not constitute a binding statement. For further information please contact our application engineering department. The tests carried out above only refer to the adhesive properties and have no significance in terms of compatibility with the stated substrates.

*1: Different PLEXIGLAS® types exhibit certain differences in their chemical resistance. Stresses must be expected in some applications. The resulting stresses, in combination with certain agents, can lead to "stress cracking". The duration, temperature and concentration of the acting substance have a fundamental influence on any "stress cracks". When using our products in combination with PLEXIGLAS®, the suitability must therefore be checked in advance.

*2: The compatibility with various mirror coatings by different manufacturers is regularly tested in our laboratory. Advance testing is recommended due to production processes of the various manufacturers, into which we have no insights, and as a function of the existing substrate and bonding variants.

4. Processing

General instructions: The expiry date of the material must be observed, otherwise the properties of the product can no longer be guaranteed. If the products are stored and/or transported over a longer period of time at higher temperatures/humidity, the shelf life may be reduced or the material properties may change. Strong environmental influences (e.g. high temperature, UV exposure, chemical influences such as vapours) can affect the properties of the material to varying degrees. Before applying, the user must ascertain that the building materials (solid, liquid or in gaseous form) are compatible with the sealant in the contact area. Pay attention to the ambient and substrate temperature during application because as excessively high or low temperatures can lead to changes in properties. Due to the large number of possible influences during processing, it is always advisable for the processor to carry out a test processing before use. Good ventilation must be ensured during processing and curing.

Pre-treatment of the adhesion surfaces: The substrate must be pretreated in accordance with the instructions in section 3 of this technical data sheet.

Joint design: For motion compensating joints, the dimensions must be designed to absorb the maximum motion expected. A minimum cross-section of 3x5 mm must be adhered to for the joint. The joint design must comply with the applicable standards and regulations. To avoid 3-edge adhesion, backfill with a suitable material if necessary (preferably Ramsauer 1050 round profile closed-cell)



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Application of the sealant: The product must be applied uniformly to the joint avoiding inclusions. If the substrate is pretreated with primer, its flash-off time must be observed. The tooling work must be completed within the stated skin formation time. When reworking, good contact with the adhesive surfaces/joint edges must be ensured (use Ramsauer tooling agent).

After-treatment: When using a tooling agent, apply it fresh, unused and sparingly. Once the joint has been formed, any residue of tooling agent must be removed before it dries, otherwise visual flaws are to be expected. Aquariums must be rinsed sufficiently with water before being put into operation.

5. Meets the requirements of IVD instruction sheet

No. 21	Elastic joint sealing in the food sector
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6. Maintenance and care

Ramsauer sealants and adhesives are carefully manufactured using state-of-the-art production processes. This results in high-quality products which, when processed appropriately, enable durable and resistant bonding and jointing. However, in order to guarantee the functionality of the joints and bondings, they need to be checked at regular intervals in accordance with the loads they are exposed to (chemical, mechanical, thermal, UV radiation), to clean them and to renew them if necessary (also see information sheet "Care and maintenance of joint seals").

7. Application restrictions

- When used with uncoated metals (brass, copper, lead, zinc, etc.) the acetic acid released during curing can cause corrosion.
- Before using the product on substrates that have been pre-treated with water-thinnable paint systems, it is essential to carry out adhesion tests.
- Not suitable for alkaline substrates.
- Substrates containing tar, plasticizers and bitumen are unsuitable as an adhesive surface.
- 410 Aquarium is not suitable for bonding mirrors and natural stones
- Contact with LSG films and insulating glass edge composites must be avoided!
- Not suitable for bonding Plexiglas® aquariums.

8. Safety instructions

Please refer to the current EC safety data sheets. Data sheets are available at any time from our website at www.ramsauer.eu.

9. Liability for defects

The information, in particular the suggestions for the processing and use of our products, is based on our knowledge and experience in normal use cases at the time of printing. Depending on the specific circumstances, in particular with regard to substrates, processing and environmental conditions, the results may differ from this information. Therefore, no guarantee can be provided for the quality of the results achieved, which are influenced by the aforementioned circumstances. No legal claim, in whatever form, can be asserted against Ramsauer GmbH & Co KG based on these reference or from a verbal consultation, unless we are guilty of intent or gross negligence in this respect. Ramsauer GmbH & Co KG guarantees that its products comply with the technical properties specified in the technical data sheets until the expiry date. Product users must consult the latest technical data sheet, which can be requested from us. Our current General Terms and Conditions apply, which you can download at any time from our homepage at www.ramsauer.eu. On publication of a new version/revision of the technical data sheet, all previous versions of the respective product lose their validity.