



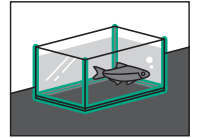
**RAMSAUER®**

# 410

**LASTING BONDS.**

# Aquarium

**1-component acetic cure silicone sealant**



Nonfood Compounds  
Category Code S1

## Technical data sheet

Version: 02-2024

### 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+



## 1. Mechanical Properties

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 <sup>2</sup> (DIN EN ISO 8339)
Module	~ 0.52 N/mm <sup>2</sup> (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; 400 & 600ml foil bag; industrial container 20-l drum; 200-l drums
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

410 Aquarium is resistant to algae and salt water as well as to alkaline and acidic vapours in terrariums. Physiologically harmless in cured state. Additionally, 410 Aquarium is permanently resistant to the chlorinated water present in swimming pools. Resistant to commercially available cleaning agents and disinfectants in the short term (for the duration of cleaning). Compatible with laminated glass.



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### 3. Priming table

Key

+	Good adhesion without priming
-	No adhesion
Primer	Recommended primer

Glass	+
Tiles	+
Pine wood	Primer 70
Wet ground concrete	-
Concrete, formwork smoothness	-
Steel DC 04	Primer 140
Hot-dip galvanised steel	Primer 140
Stainless steel	Primer 140
Zinc	-
Aluminium	+
Aluminium AlMg1	+
Aluminium AlCuMg1	+
Aluminium 6016	+
Anodised aluminium	+
Brass MS 63 Hardness F 37	-
PVC Kömadur ES	Primer 100 / Primer 105
PVC soft	Primer 100 / Primer 105
PC Makrolon Makroform 099	+
Polyacrylic PMMA XT 20070 Röhm*1	-
Polystyrene PS Iroplast	Primer 100 / Primer 105
ABS Metzoplast ABS 7 H	Primer 100 / Primer 105
PET	+
PU waste quality	+
Copper	-
Polycarbonate	-
PMMA Röhm sanitary quality	-
Mirrors*2	-
Natural stone	-

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. Application

410 Aquarium is a fast-curing, fungicide-free acetate system for waterproof bonding of fully glazed aquariums and for fully-glazed constructions. Suitable for building terrariums. 410 Aquarium is suitable for use in drinking water applications and in the foodstuff industry.



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## 5. Meets the requirements of IVD instruction sheet

No. 21	Elastic joint sealing in the food sector
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## 6. Processing

**General instructions:** The expiry date of the material must be observed, otherwise the stated mechanical properties of the product can no longer be guaranteed. Observe the ambient temperature and substrate temperature. **Pretreatment of the adhesion surfaces:** The adhesion surfaces must be load-bearing, dry, and free of dust, grease, and oil. Good and durable bonding is ensured after thorough cleaning of the glass and results in good adhesion properties under extreme pressure loads. To avoid detachment of and cracks in the adhesive, complete vulcanisation/curing is required before the aquariums are filled or exposed to impacts and vibrations, e.g. during transport. For a joint depth of approx. 10 mm, a curing time of 2 weeks must be observed. If you intend to use the silicone in coating thicknesses of more than 10 mm, please contact our application engineering department. The required glass thicknesses depend on the capacity or dimensions of the aquarium.

## 7. Application restrictions

**Caution:** When used with metals, especially brass, copper, lead, zinc, etc., the acetic acid released during curing causes corrosion. Aquariums must be rinsed with plenty of water before use. Tanks with a capacity of 200 litres or more must be structurally reinforced by a frame. If a primer is used, its flash-off time and the instructions for intended use must be observed. Not suitable for bonding Plexiglas® aquariums. We recommend our 670 2-K-Kleber product for large aquariums. Please contact our application engineering department for details. Avoid contact with materials containing softeners and bitumen. 410 Aquarium is not suitable for bonding mirrors. Not suitable for joints in marble and other natural stones.

## 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](http://www.ramsauer.eu).

## 9. Application notes

Good ventilation must be ensured during processing and curing. Due to the large number of possible influences during processing and application, the processor must always carry out a test processing before use. Note the expiry date of the material. 1-component sealants are not suitable for full-surface bonding. The curing speed increases with increasing coating thickness. If the 1-component material is used in coating thicknesses of more than 15 mm, please contact our application engineering department. If the products are stored and/or transported over a longer period of time (several weeks) at higher temperatures/humidity, the shelf life may be reduced or the material properties may change.

## 10. 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 the guarantee of a work result or a liability, for whatever legal reasons, can be justified neither from these references, nor from a verbal consultation, unless we are guilty of intent or gross negligence in this respect. Ramsauer guarantees that its products comply with the technical properties specified in the technical data sheets until the expiry date.

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