

WACKER® 121 - AQUARIUM

SEALANTS AND ADHESIVES

Product description

WACKER® 121 - AQUARIUM is a one-part, acetoxy high performance silicone sealant for construction of aquariums.

Properties

WACKER® 121 - AQUARIUM cures at room temperature in the presence of atmospheric moisture to give a permanent flexible silicone rubber.



Special features

- long shelf life
- non-sag
- excellent tooling characteristics for professional use
- readily gunnable both at low (+5 °C) and high (+40 °C) temperatures
- rapid crosslinking: quickly becomes tack-free and crack resistant
- flexible at low (-40 °C) and high temperatures (+150 °C) following cure
- low shrinkage on curing
- special high-viscosity paste
- excellent mechanical properties

Application

- Sealing of joints exposed to high mechanical loads
- Sealing of joints which need to quickly build up mechanical strength
- Suitable for glazing and industrial applications
- Especially suitable for the construction of aquariums which meet the requirements of DIN 32 622. Ensure bond thickness is at least 1mm. For this specific application the temperature should be between +15 °C and +40 °C

Adhesion

WACKER® 121 - AQUARIUM exhibits excellent primerless adhesion to most non-porous siliceous materials (e.g. glass, tiles, ceramics, enamel, glazed tiles); metals (e.g. aluminum, steel, zinc or copper); impregnated, varnished or painted wood; and some plastics.

Users must carry out own tests due to the great variety of substrates.

The adhesion can be improved in many cases by pretreatment of the substrate with a primer.

Processing

The substrate areas that will be in contact with the sealant must be clean, dry and free of all loose material such as dust, dirt, rust, oil and other contaminants. Non-porous substrates should be cleaned with a solvent and clean, lint-free, cotton cloth. Remove residual solvent before it evaporates with a fresh clean, dry cloth. For application from cartridges cut thread open, fix nozzle on top and cut to required bead size. The sealant can be applied in beads or layers. It requires moisture in order to cure.

The curing time can take longer at lower temperatures, lower humidity or by low volume of air exchange.

Restrictions on use

WACKER® 121 - AQUARIUM should not be used on substrates such as marble, concrete, fibrous cement and mortar, as the product releases acetic acid during curing.

WACKER® 121 - AQUARIUM should not be used in

contact with metals such as lead, copper, brass or zinc due to corrosion.

WACKER® 121 - AQUARIUM may be discolored in contact with some organic elastomers, e.g. EPDM and neoprene.

WACKER® 121 - AQUARIUM is not suitable for applications involving contact with natural stone, such as marble, granite, quartzite, as it can cause staining. WACKER® 121 - AQUARIUM is not suitable for insulating glass applications.

WACKER® 121 - AQUARIUM should not be used on pre-stressed polyacrylate elements as it may cause environmental stress cracking.

It is the responsibility of the user to test the compatibility of the sealant with the adjoining materials. Incompatible substances like coatings or organic plasticizers can lead to discoloration of the sealant. Cleaning agents and gaseous emissions can damage the sealant in its function or change its appearance. WACKER cannot make a general statement to the compatibility of all these varying materials with the sealant. In case of doubt the user shall conduct appropriate preliminary tests.

Storage

The 'Best use before end' date of each batch is shown on the product label.

Storage beyond the date specified on the label does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.

Packaging

WACKER® 121 - AQUARIUM is usually supplied in standard size cartridges that fit all standard caulking guns.

Additional information

WACKER® 121 - AQUARIUM meets following specifications:

- DIN 32622 TÜV Rheinland
(Rhineland Technical Inspection Authority):
Approved as sealing compound for the construction of aquariums (R60007911 dated July 13,2004)
- ASTM C 910, type S, grade NS,
class 25, use NT, G and A
- ISO 11600-G, Class 20 HM

Safety notes

Comprehensive instructions are given in the corresponding Material Safety Data Sheets. They are available on request from WACKER subsidiaries or may be printed via WACKER web site <http://www.wacker.com>.

During vulcanization acetic acid is released. These vapors should not be inhaled for long periods or in high concentration. Hence, good ventilation of the work place is necessary. Should uncured silicone rubber come into contact with eyes or mucous membranes, the affected area must be rinsed thoroughly with water as irritation will otherwise be caused. Avoid prolonged contact of uncured sealant with the skin - use a dry cloth or paper to remove it.

Keep out of reach of children.

Cured silicone rubber, however, can be handled without any risk to health.

Product data

Typical general characteristics	Inspection Method	Value
Cure type		Acetoxo
Uncured / unvulcanized paste		
Density at 23 °C	ISO 1183-1 A	1,03 g/cm ³
Consistency	ISO 7390	non-sag
Extrusion rate at 6 bar	internal method	100 - 350 g/min
Skin forming time at 23 °C / 50 % r.h.	internal method	approx. 15 min
Cured / vulcanized rubber		
Hardness Shore A	ISO 868	22
Modulus at 100 % (joint)	ISO 8339-A	0,5 N/mm ²
Tensile strength (joint)	ISO 8339-A	0,7 N/mm ²
Ultimate elongation (joint)	ISO 8339-A	150 %
Modulus at 100 % (S2-dumbbell)	ISO 37	0,40 N/mm ²
Tensile strength (S2-dumbbell)	ISO 37	1,6 N/mm ²
Ultimate elongation (S2-dumbbell)	ISO 37	500 %
Movement capability	ISO 9047	25 %

These figures are only intended as a guide and should not be used in preparing specifications.

The data presented in this medium are in accordance with the present state of our knowledge but do not absolve the user from carefully checking all supplies immediately on receipt. We reserve the right to alter product constants within the scope of technical progress or new developments. The recommendations made in this medium should be checked by preliminary trials because of conditions during processing over which we have no control, especially where other companies' raw materials are also being used. The information provided by us does not absolve the user from the obligation of investigating the possibility of infringement of third parties' rights and, if necessary, clarifying the position. Recommendations for use do not constitute a warranty, either express or implied, of the fitness or suitability of the product for a particular purpose.

The management system has been certified according to DIN EN ISO 9001 and DIN EN ISO 14001

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