

ELASTOSIL® eco 4100



Finished Sealants

ELASTOSIL® eco 4100 is a one-component, acid-curing, low-modulus silicone sealant with outstanding adhesion and long shelf life for construction, glazing and window application as well as sanitary applications.

ELASTOSIL® eco 4100 is produced based on a 100% exchange of the fossil-based raw materials by sustainably certified renewable materials.

ELASTOSIL® eco 4100 cures at room temperature in the presence of atmospheric moisture to give a permanently flexible silicone rubber.

Properties

- suitable for use in sanitary areas
- 100% silicone
- 100% replacement of fossil based materials by renewable raws.
- non-sag
- ready gunnability at low (+ 5 °C) and high (+ 40 °C) temperatures
- low shrinkage on curing
- flexible at low (-40 °C) and high temperatures (+180 °C)
- low-modulus: better adhesion and higher safety
- rapid crosslinking: quickly becomes tack-free
- adheres excellently to glass, vitrified surfaces, ceramic tiles, selected plastics and most coatings
- excellent tooling properties
- long shelf life

Specific features

- Acetoxy-cure
- Suitable for use in sanitary areas

Technical data

Properties Uncured

Property	Condition	Value	Method
Skin forming time	23 °C 50 % r.h	20 min	-
Density	23 °C	1.02 g/cm ³	ISO 1183-1 A
Consistency ⁽¹⁾	-	non-sag	ISO 7390, profile U 20
Extrusion rate - mass flow	6 bar 23 °C	450 g/min	-

¹23°C

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

Properties Cured

Cure conditions: 190°C 10min

Property	Condition	Value	Method
Movement capability	-	25 %	ISO 11600 / EN 15651
Movement capability	-	50 %	ASTM C920
Modulus at 100 % elongation	-	0.35 N/mm ²	ISO 8339-A
Elongation at break	-	250 %	ISO 8339
Hardness Shore A	-	20	ISO 868
Tear strength	-	4.2 N/mm	ISO 34, method C
Tensile strength	-	0.60 N/mm ²	ISO 8339

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All the information provided is in accordance with the present state of our knowledge. Nonetheless, we disclaim any warranty or liability whatsoever and reserve the right, at any time, to effect technical alterations. The information provided, as well as the product's fitness for an intended application, should be checked by the buyer in preliminary trials. Contractual terms and conditions always take precedence. This disclaimer of warranty and liability also applies particularly in foreign countries with respect to third parties' rights.

Applications

- Eco-Products

Application details

Application fields

- glass and windows construction
- sealing of joints between glazing and supporting structure (frame, transoms, mullions)
- sealing of joints exposed to high levels of moisture, e.g. sanitary field
- industrial application as sealant in the automotive, aircraft and shipbuilding industries

Processing

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 a clean, lint-free, cotton cloth. Remove residual solvent before it evaporates with a fresh clean, dry cloth.

It is the user's responsibility to test the compatibility of the sealant with the adjoining materials. Incompatible substances like coating materials (paints, varnishes and glazes) or organic plasticizer containing rubbers (EPDM, butyl and neoprene) can lead to discoloration or other impairments like loss of adhesion of the sealant. Materials in direct contact with the applied sealant like cleaning agents and materials in indirect contact like gaseous emissions can damage the sealant in its function or change its appearance. Because of the multitude of these materials, Wacker cannot make a general statement to the compatibility of materials with the sealant. In case of doubt the user shall conduct appropriate preliminary tests.

The time until complete curing may be extended at lower temperature, lower humidity, increasing film thickness or by low volume of air exchange.

The use of tooling agents should be avoided if possible. Otherwise, water or a diluted solution of a little neutral soap or alcohol in water should be sparingly applied

The work should only be carried out with sufficient fresh air supply. Wear appropriate protective clothing when processing.

Certification

ELASTOSIL® eco 4100 is certified and classified in accordance to

- ISO 11600 G - Class 25 LM
- EN 15651-1 - Class 25 LM F-INT-EXT-CC
- EN 15651-2 - Class 25 LM G-CC
- EN 15651-3 - Class XS1
- BS 15651-1 - Class 25 LM F-INT-EXT-CC
- BS 15651-2 - Class 25 LM G-CC
- BS 15651-3 - Class XS1
- ASTM C 920 - Type S, Grade NS, Class 50
- EMICODE EC1 PLUS
- M1-Emission class

Adhesion

ELASTOSIL® eco 4100 exhibits excellent primerless adhesion to most material used for sanitary application, e.g. glass, tiles, ceramics, enamel, glazed tiles, clinker and selected plastics as well as lacquered, glazed or impregnated wood. Users must carry out their own tests due to the great variety of substances. The adhesion can be improved in many cases by pretreatment of the substrates with a primer. If adhesion difficulties arise please contact our technical service.

Restrictions on use

ELASTOSIL® eco 4100 must not be used for insulating glass applications.

ELASTOSIL® eco 4100 should not be used on substrates such as marble, concrete, fibrous cement, and mortar, as the product releases acetic acid during vulcanization.

ELASTOSIL® eco 4100 should not be used in contact with metals such as lead, copper, brass or zinc due to corrosion.

ELASTOSIL® eco 4100 may be discolored in contact with some organic elastomers, e.g. EPDM, APTK and neoprene.

ELASTOSIL® eco 4100 must not be used for sealing of aquaria.

ELASTOSIL® eco 4100 is not suitable for applications involving contact with natural stone, such as marble, granite, quartzite, as it can cause staining.

ELASTOSIL® eco 4100 is not suitable for insulating applications or structural glazing.

ELASTOSIL® eco 4100 is not recommended for sealing of aquaria or for longer-term use under water.

ELASTOSIL® eco 4100 is not suitable for food grade applications where the joints are likely to come in contact with food.

ELASTOSIL® eco 4100 is not suitable for use as a mirror adhesive.

Packaging and storage

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.

Safety notes

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

Keep away from children.

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>.

QR Code ELASTOSIL® eco 4100



For technical, quality or product safety questions, please contact:

Wacker Chemie AG, Hanns-Seidel-Platz 4, 81737 Munich, Germany
productinformation@wacker.com, www.wacker.com

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