

ELASTOSIL® 4500



Finished Sealants

ELASTOSIL® 4500 is a one-component, acid-curing silicone sealant for general-purpose sealing in high temperature applications up to 250 °C.

ELASTOSIL® 4500 cures at room temperature in the presence of atmospheric moisture to give a permanently flexible silicone rubber.

Properties

- non-sag
- ready gunnability at low (+5 °C) and high (+40 °C) temperatures
- flexible at low (-40 °C) and high temperatures (+250 °C)
- acetic acid crosslinking system
- rapid crosslinking: quickly becomes tack-free
- adheres excellently to glass, vitrified surfaces, ceramic tiles, non corrosive metals and many coatings
- good tooling properties
- maintains elastic properties at continuous temperatures of up to 250 °C
- short-term resistance up to 275 °C

Specific features

- Acetoxy-cure

Technical data

Properties Uncured

Property	Condition	Value	Method
Skin forming time	23 °C 50 % r.h	20 min	-
Density	23 °C	1.03 g/cm ³	ISO 1183-1 A
Consistency ⁽¹⁾	-	non-sag	ISO 7390, profile U 20
Extrusion rate - mass flow	6 bar 23 °C	250 g/min	-

¹23°C

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

Properties Cured

After 4 weeks' storage at 23 °C / 50 % rh

Property	Condition	Value	Method
Movement capability	-	25 %	ISO 11600
Modulus at 100 % elongation	-	0.45 N/mm ²	ISO 8339-A
Elongation at break	-	250 %	ISO 8339
Hardness Shore A	-	25	ISO 868
Tear strength	-	4.2 N/mm	ISO 34, method C
Tensile strength	-	0.7 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

- Ready-to-Use Silicone Sealants - Special Applications
- Sealants
- Silicone Sealants

Application details

Applications fields

- Sealing of connecting and expansion joints exposed to high temperatures
- Sealing of joints exposed to long-term temperatures of 250 °C (oven and chimney construction)
- Suitable for industrial applications

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

Adhesion

ELASTOSIL® 4500 exhibits excellent primerless adhesion to most non-porous siliceous material, e.g. glass, tiles, ceramics, enamel, glazed tiles, clinker and non-corrosive metals.

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.

Heat Resistance

ELASTOSIL® 4500 is heat stabilized and remains unaffected by long term exposure to extreme temperatures up to 250 °C. It can also be used for shorter periods (some weeks) at temperatures up to 275 °C.

Figure 2 shows the effect of heat aging at 275 °C on the elongation at break, tensile strength and hardness of the silicone rubber.

Restrictions on use

ELASTOSIL® 4500 should not be used on substrates such as concrete, fibrous cement and mortar, as the product releases acetic acid during vulcanization.

ELASTOSIL® 4500 should not be used in contact with metals such as lead, copper, brass or zinc due to corrosion.

ELASTOSIL® 4500 may be discolored in contact with some organic elastomers, e.g. EPDM, APTK and neoprene.

ELASTOSIL® 4500 is not recommended for sealing of aquaria, please use our ELASTOSIL® 4300.

ELASTOSIL® 4500 is not recommended for use on natural stone, such as marble, granite, quartzite, as it can cause staining.

ELASTOSIL® 4500 is not recommended for structural glazing bonding.

ELASTOSIL® 4500 is not suitable as a cylinder head gasket or for parts that are constantly exposed to fuels (petrol).

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® 4500



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

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