

ELASTOSIL® N199

RTV-1 SILICONE RUBBER / ADHESIVE AND SEALANT

Product description

ELASTOSIL® N199 is a non-slump RTV-1 silicone sealant that cures at room temperature on contact with moisture in the air.

Special features

- ready-to-use, one-part system
- non-slump
- translucent
- medium hardness
- high flexibility
- Excellent adhesion

Application

- general-purpose adhesive for the electronics industry
- CIPG- and FIPG-applications

Processing

ELASTOSIL® N199 is a one-part room temperature vulcanizing sealant that cures to a flexible silicone rubber on exposure to water vapor in the air. During the curing process a small amount of an oxime is released. The crosslinking starts at all places where the paste comes into contact with atmospheric moisture and proceeds from the outer to the inner parts of the silicone. After about 30 minutes a skin of cured material is formed at the surface. After formation of a sufficiently thick skin, glued parts may be handled without destruction.

For the crosslinking to take place, water vapor from the air is necessary. For this reason the curing rate strongly depends on the atmospheric humidity in the surrounding. The higher the atmospheric moisture the faster the material will be cured fully. The temperature has a great influence on the curing rate as well. The higher the temperature the faster the material will be fully cured.

If removing of silicone rubber from machines or dispensing equipment is necessary, white spirit is recommended as a solvent. However, cleaning should take place before the rubber is fully cured. Afterwards only the use of mechanical forces in combination with a swelling solvent or the use of high temperatures of approximately 100°C will help to remove sealant residues.

ELASTOSIL® N199 shows good primerless adhesion to many substrates. We recommend running preliminary tests to optimize conditions for the particular application.

Comprehensive instructions are given in our leaflet "ELASTOSIL® RTV-1 Silicone Rubber".

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 of ELASTOSIL® N199, a total of 4% by weight of an oxime is being split off. These vapours should not be inhaled for long periods or in high concentration. Work areas should therefore be well ventilated. Contact of unvulcanized silicone rubber with eyes and mucous membranes must be avoided as this would cause irritation. However if it does happen, rinse the affected area thoroughly with water.

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>.

Product data

| Typical general characteristics | Inspection Method | Value |
|-----------------------------------------------------------------------|-------------------|------------------------|
| Product data (uncured) | | |
| Color | | colorless |
| Density at 23 °C | DIN 53479 | 1,05 g/cm ³ |
| Extrusion Rate (3 mm nozzle, pressure 0.21 N/mm ² , 23 °C) | | 14 g/10s |
| Skin-forming time, 23 °C, 50 % RH | | 30 min |
| Curing time, 23 °C, 50 % RH | | 8 h/mm |
| Product data (cured) | | |
| Density at 23 °C in water | ISO 2781 | 1,06 g/cm ³ |
| Hardness Shore A | ISO 868 | 35 |
| Elongation at break | ISO 37 | 450 % |
| Tensile strength | ISO 37 | 4,00 N/mm ² |
| Tear strength | ASTM D 624 B | 8,0 N/mm |
| Dielectric strength | | 18 kV/mm |
| Volume resistivity | | 10 ¹⁶ Ω*cm |
| Tracking resistance | IEC 112 | > 600 CTI |

2 mm, 14 d storage at 20 °C, 50 % RH

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

The data presented in this leaflet 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 leaflet 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 recommendations do 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 products for a particular purpose.

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

WACKER is a trademark of Wacker Chemie AG.
ELASTOSIL® is a trademark of Wacker Chemie AG.

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

Wacker Chemie AG
Hanns-Seidel-Platz 4
81737 München, Germany
info.silicones@wacker.com

www.wacker.com