

ELASTOSIL[®] RT 702



1-part heat-curing silicone rubber

ELASTOSIL[®] RT 702 is a non-slump, one-part heat-curing silicone adhesive.

Cured ELASTOSIL[®] RT 702 shows very good adhesion to many substrates and long-term stability against weathering, moisture and UV light. The cured silicone rubber may continuously be exposed to constantly changing climatic conditions, UV radiation and temperatures as high as 250 °C (482 °F) without damage.

Properties

Uncured:

- Non-slump
- Thixotropic
- Fast curing at elevated temperature

Cured:

- Suitable for FIPG and, to a certain degree, for CIPG applications
- Resistant to antifreeze agents and coolants (water/glycol mixtures)
- Outstanding heat stability
- recommended service temperature range: -50 °C to +250 °C

Specific features

- Electrically insulating
- Heat resistant
- Media resistant
- One-component
- Self-adhesive
- Thixotropic
- UV & weathering-resistant

Technical data

Properties Uncured

| Property | Condition | Value | Method |
|--------------------------|-----------------|------------------------|-----------------|
| Colour | - | black | - |
| Density | 23 °C | 1.21 g/cm ³ | ISO 1183-1 A |
| Pot Life (approximately) | 23 °C | 6 month | - |
| Viscosity, dynamic | 25 °C 0.5 1/S | 800000 mPa·s | DIN EN ISO 3219 |
| Viscosity, dynamic | 25 °C 25 1/S | 80000 mPa·s | DIN EN ISO 3219 |

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

Properties Cured

Curing conditions: 10 min. at 165 °C in a circulating air oven, 2 mm sheet, pressed, no post-curing.

| Property | Condition | Value | Method |
|---------------------|-----------|------------------------|---------------------|
| Hardness Shore A | - | 40 | DIN ISO 48-4 |
| Tensile strength | - | 6.1 N/mm ² | ISO 37 type 1 |
| Elongation at break | - | 500 % | ISO 37 type 1 |
| Tear strength | - | 10.1 | ASTM D 624 B |
| Color | - | black | - |
| Density (in water) | 23 °C | 1.22 g/cm ³ | DIN EN ISO 1183-1 A |

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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

- Climate Control
- Heating & Cooling
- Machine Building
- White Goods

Application details

- Multipurpose glue
- Typical fields of application: household appliances, automotive, mechanical engineering.

Processing

Preparation:

All surfaces must be clean and free of contaminants that will inhibit the cure of ELASTOSIL® RT 702. Examples of inhibiting contaminants are sulfur containing materials, plasticizers, urethanes, amine containing materials and organometallic compounds – especially organotin compounds. If a substrate's ability to inhibit cure is unknown, a small scale test should be run to determine compatibility.

| Temperature | Curing rate, 1 cm |
|-------------|-------------------|
| 140 °C | 10 min |
| 200 °C | 2 min |

To reduce the risk of bubbles or void formation during curing, ELASTOSIL® RT 702 can be de-aerated prior to use by applying a vacuum of 25-50 mbar for 10-15 min.

Curing:

ELASTOSIL® RT 702 is a one-part heat-curing silicone, the curing time of which is highly dependent on temperature and on both the size and the heat sink properties of the parts to be bonded. ELASTOSIL® RT 702 is usually cured between 140 °C and 200 °C in order to secure a quick build-up of adhesion to the respective substrates. Typical curing temperatures and resulting curing times are given in adjacent table.

Detailed information about processing one-part heat-curing silicones is given in our brochure "ROOM TEMPERATURE VULCANIZING (RTV) SILICONES - MATERIAL AND PROCESSING GUIDELINES". We recommend running preliminary tests to optimize conditions for the particular application.

Removal:

If removal of the silicone from machines or dispensing equipment is necessary, white spirit or similar nonpolar solvents are recommended. However, cleaning ideally should take place before the silicone is fully vulcanized. Cured silicone rubber needs to be rubbed off or removed mechanically, if necessary in combination with a swelling agent (solvent) or a chemical silicone remover.

Packaging and storage

Storage

Store in a dry and cool place.

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

According to the latest findings, the addition-curing silicone rubber ELASTOSIL® RT 702 contains neither toxic or corrosive substances which would require special handling precautions.

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® RT 702



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

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