

ELASTOSIL® RT 779



Room Temperature Curing Silicone Rubber (RTV-2)

ELASTOSIL® RT 779 is a non-slump, condensation curing RTV-2 silicone adhesive. When processed with curing agent WACKER® Catalyst T 79, a self bonding and durable silicone rubber with outstanding oil resistance is formed.

Cured ELASTOSIL® RT 779 shows long-term stability against weathering, moisture and UV light. The silicone elastomer may continuously be exposed to constantly changing climatic conditions, UV radiation, motor oil and temperatures as high as 180 °C (356 °F) without damage.

Properties

Uncured:

- Non-slump paste
- Fast curing at room temperature
- To be cured with WACKER® Catalyst T 79 (recommended mixing ratio: 10:1)
- Low risk of curing inhibition

Cured:

- Medium hardness
- Primerless adhesion to many substrates (glass, ceramics, metals, plastics and powder coatings), in particular to stainless steel, aluminium, cast iron and polyamide.
- Recommended service temperature range: -50 °C to +180 °C
- Designed for FIPG applications
- Outstanding oil resistance

The performance of ELASTOSIL® RT 779 in regard to adhesive sealing of oil pans was proven by inpro Innovationsgesellschaft für fortgeschrittene Produktionssysteme in der Fahrzeugindustrie mbH, Berlin, Germany. Test data is available on request.

Specific features

- Condensation-curing
- Electrically insulating
- Non-slump
- Oil resistant
- Primerless adhesion to most substrates
- Resistant to moisture
- Self-adhesive
- Shear thinning
- Thixotropic
- Two-component
- UV & weathering-resistant

Technical data

Properties Uncured

Property	Condition	Value	Method
Colour	-	white	-
Density	25 °C	1.38 g/cm ³	DIN 53217
Viscosity, dynamic	25 °C 0.5 1/S	300000 mPa·s	DIN EN ISO 3219
Viscosity, dynamic	25 °C 25 1/S	150000 mPa·s	DIN EN ISO 3219

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

Catalyzed

Mixed with WACKER Catalyst T 79 (mixing ratio in parts by weight)

Property	Condition	Value	Method
Viscosity of the mixture (10:1)	25 °C 0.5 1/s	approx. 500000 mPa·s	DIN EN ISO 3219
Viscosity of the mixture (10:1)	25 °C 25 1/s	approx. 75000 mPa·s	DIN EN ISO 3219
Pot Life (10:1)	23 °C	7 - 10 min	-
Pot Life (12:1)	23 °C	10 - 15 min	-
Pot Life (8:1)	23 °C	5 - 8 min	-
Tack-free time (10:1)	23 °C	approx. 45 min	-
Tack-free time (12:1)	23 °C	approx. 60 min	-
Tack-free time (8:1)	23 °C	approx. 30 min	-

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Properties Cured

Cured with WACKER Catalyst T 79, mixing ratio 10:1 (by weight). Curing Conditions: 14 days at 23 °C and 50 % rel. humidity, 2 mm sheet, no post-curing.

Property	Condition	Value	Method
Color	-	anthracite	-
Density (in water)	23 °C	1.32 g/cm ³	DIN EN ISO 1183-1 A
Hardness Shore A	-	50	ISO 1183-1 A
Tensile strength	-	2.8 N/mm ²	ISO 37 type 1
Elongation at break	-	250 %	ISO 37 type 1
Tear strength	-	9.5 N/mm	ASTM D 624 B

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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

- Automotive & Transport

Application details

- Special FIPG grade for the adhesive sealing of automotive assemblies with oil contact, e.g. engine housings, oil pans, gear boxes.
- Typical fields of application: automotive, mechanical engineering.

Processing

Surface Preparation:

ELASTOSIL® RT 779 shows primerless adhesion to many substrates and usually tolerates a multitude of surface contaminants. However, for an optimum bonding all surfaces must be clean and dry. Standardized industrial cleaning processes can be applied to remove dirt, rust, oil or grease. Additionally, and in complicated cases involving demanding substrates, the surfaces can either be roughened by sandblasting or activated by plasma, corona or laser treatments prior use.

Mixing and Curing:

ELASTOSIL® RT 779 is processed in combination with WACKER® Catalyst T 79 as curing agent. Prior to application the two compounds must be thoroughly mixed, either manually or by automatic metering lines equipped with static or dynamic mixing devices. The recommended mixing ratio is 10:1 by weight.

Potlife and curing speed can be modified within limits by adjusting the ratio of base compound (ELASTOSIL® RT 779) to curing agent (WACKER® Catalyst T 79). Varying the mixing ratio between 8:1 and 12:1 usually has a small effect on the properties of the cured rubber. However, if the mixing ratio differs substantially from the recommended scope, preliminary tests should be carried out to check the cured material's suitability. General information about pot life and resulting curing times are given in the respective tables "Catalyzed".

Moreover curing speed can be slightly accelerated by raising the temperature. Heating, however, must not exceed 60 °C before curing is completed.

After completion of the vulcanization process the product may continuously be exposed to constantly changing climatic conditions, UV radiation, and high temperature without damage. Cured ELASTOSIL® RT 779 usually shows good primerless adhesion to many substrates, even when continuously exposed to motor oil and lubricants.

Detailed information about processing and modifying curing speed 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 needs to be removed mechanically, if necessary in combination with a swelling agent (solvent).

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

While curing ELASTOSIL® RT 779 releases a total of approx. 1.5 - 2 wt.% alcohol. These vapors should not be inhaled for long periods or in high concentrations. Hence ventilation of the work place is recommended.

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 779



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

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