

Description

Single part RTV (RTV-1) silicones are one-step, ready-to-use adhesives and sealants. They crosslink automatically when exposed to air humidity at room temperature. Cost-effectiveness and sustainability are key considerations when it comes to bonding and sealing. Bonding with silicone adhesive sealants has decisive advantages over traditional mechanical joining technologies in terms of handling, functionality, durability and cost efficiency. These silicone rubbers are either room-temperature-vulcanizing (RTV) or one-part heat-curing systems. Both systems are exceptional for their processing properties.

Another important criterion for selecting the best product is the flow property – we offer you RTV-1 silicones with a consistency ranging from free-flowing to non-sag pastes.

WACKER silicone adhesive sealants can be applied easily and economically either manually or with automated dispensing equipment. Compared to mechanical joining methods, adhesive sealants significantly reduce not only the quantity of parts (e.g. screws, rivets, etc.) but also the number of process steps. Hence, silicone adhesive sealants help to reduce process cycle time.

RTV-1 silicones find many applications in form-in-place (FIP) gaskets and cure-in-place (CIP) gaskets.

Features & Benefits

- **Bonding efficiency:** An adhesive sealant acts as a bonding agent and sealant at the same time. The need for additional mechanical safeguarding measures often becomes obsolete.
- **High joint reliability:** Thanks to the good electrical insulating properties of silicones, different

metals can be bonded without the risk of galvanic corrosion.

- **Joint stress relaxation:** Thanks to their low Young's modulus, silicone adhesive sealants effectively compensate thermomechanical loads resulting from substrates with a different coefficient of thermal expansion.
- **Versatile applicability:** Silicone adhesive sealants have a high ability to bond dissimilar materials, usually without the need for primers.
- **Temperature resistance:** Permanently elastic properties from -45°C to over approx $+180^{\circ}\text{C}$; Specialised types remain elastic even at 250°C and briefly tolerate even higher temperature spikes
- **Chemical resistance:** Permanent resistance to aqueous solutions, dilute acids and bases as well as solvents
- **Resistance to radiation:** Can be exposed to electromagnetic radiation emitted by sources from microwaves to UV even at higher doses
- **Vibration and mechanical strength:** Processing tolerances for joint parts are effectively compensated and vibrations are effectively dampened thanks to its high elasticity
- **Minimal moisture absorption:** The hydrophobic, water-repellent surface of silicones offers excellent protection against moisture

Specifications

WACKER Silicone Adhesive Sealants



Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Elastosil N9111	Black	Alkoxy	Non slump paste thixotropic	Skin 25-30 mins 12H/mm	Neutral cure non-corrosive adhesive sealant with excellent primerless adhesion; applications in electronics/automot
Elastosil N9111	White	Alkoxy	Non slump paste	Skin 25-30 mins 12H/mm	Neutral cure non-corrosive adhesive sealant with excellent primerless adhesion; applications in electronics/automot

WACKER Silicone Adhesive Sealants



Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Elastosil N 2034	Black	Alkoxy	Flowable	Skin 20 mins	General purpose adhesive sealant; suitable for FIP gaskets; UL94 V-0; neutral cure
Elastosil N 2189	Black	Alkoxy	Non slump	Skin 15 mins	General purpose adhesive sealant; suitable for FIP gaskets; UL94 V-0; neutral cure; oil and coolant resistant; hard

WACKER Silicone Adhesive Sealants



Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Elastosil E4	Transparent	Acetoxy	Non slump	Skin 15 mins	General-purpose adhesive and sealant with low compression set
Elastosil E10	Red	Acetoxy	Very low viscosity	Skin 10-15 mins	Excellent heat stability and good mechanical properties; sealing tubular heaters

WACKER Silicone Adhesive Sealants



Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Elastosil E43	Transparent	Acetoxy	Self levelling	Skin 15 mins	General-purpose adhesive and sealant; excellent primerless adhesion to many substrates
Elastosil E43 N	Transparent	Acetoxy	Self levelling	Skin 5-10 mins	Food compliant; excellent primerless adhesion to many substrates.

WACKER Silicone Adhesive Sealants

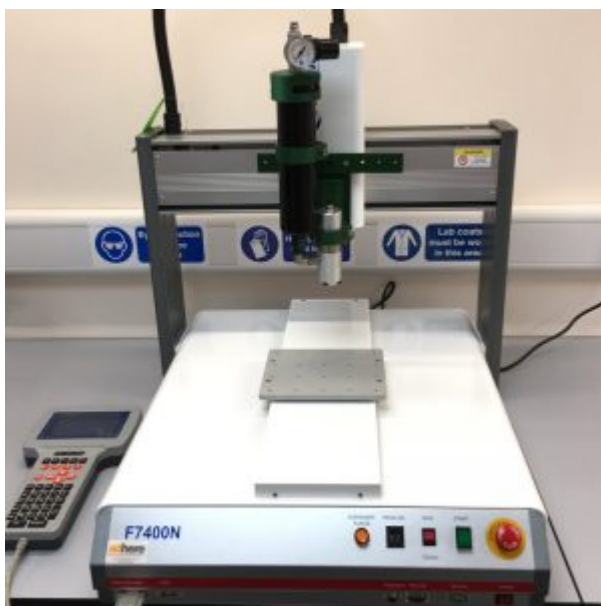


Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Elastosil E47	Transparent	Acetoxy	Non slump	Skin 5-15 mins	General-purpose adhesive and sealant; very good mechanical properties
Elastosil E50 N	Translucent	Acetoxy	Flowable	Skin 8-20 mins	Food compliant; excellent primerless adhesion to many substrates. Meets MIL-A-46106

WACKER Silicone Adhesive Sealants



Product	Colour	Cure Mechanism	Rheology	Cure Time	Applications
Semicosil 989/1K	Black	Thermal	Non slump thixotropic	6h at 100°C; 10 min at 150°C	General purpose adhesive for electronics; FIP and CIP gasket applications; primerless adhesion to many substrates; cold storage



310ml Cartridge Fed Silicone Dispensing System

We supply the equipment necessary to dispense silicones, including [manual silicone dispensing guns](#) and complete [automated silicone dispensing systems](#). Get in touch with our team to discuss the best options for your production environment.

See how one of our customers improved their manufacturing process and quality in this silicone dispensing [Case Study](#):

<p>CASE STUDY</p> <p>intertronics adhesives, coatings, sealants & equipment for your manufacturing and technology applications</p> <p>Fisnar Dispensing robot preeflow® eco-PEN 600 Precision volumetric dosing pump flowplus¹⁶ Inline fluid sensor</p>  <p>Click here to watch a video of this case study</p>	<p>Automated dispensing helps security manufacturer increase throughput and quality</p> <p>GJD Manufacturing switched to an automated method of dispensing silicone for sealing a plastic lens to aluminium housing. By doing this, they improved the throughput and quality of their white-light and infrared LED illuminators for the security industry.</p>
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Specifications

Product	UL94 V-0	Tensile Strength	Elongation %	Temperature Range	Hardness
Elastosil N9111	Yes	2.2	500	-50 to 200°C	Shore A 30
Elastosil N9111	Yes	2.2	500	-50 to 200°C	Shore A 30
Elastosil N 2034	Yes	2	200	-50 to 180°C	Shore A 35
Elastosil N 2189	Yes	2.3	250	up to 180°C	Shore A 45
Elastosil E4		2.0	750	up to 180°C	Shore A 15
Elastosil E10		6.2	600		Shore A 25
Elastosil E43		4.5	500	-50 to 180°C	Shore A 30
Elastosil E43 N		6.2	600		Shore A 30

WACKER Silicone Adhesive Sealants



Product	UL94 V-0	Tensile Strength	Elongation %	Temperature Range	Hardness
Elastosil E47		4.5	450		Shore A 35
Elastosil E50 N		1.5	150	up to 180°C	Shore A 35
Semicosil 989/1K		5	200	-50 to 180°C	Shore A 55

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