

Description

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. 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. 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 differing coefficients 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°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



Volumetric Dispensing System for 310ml Cartridges

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](#):

CASE STUDY

intertronics
adhesives, coatings, sealants & equipment
for your manufacturing and technology applications

Fisnar
Dispensing robot
preeflow® eco-PEN
600
Precision volumetric
dosing pump
flowplus¹⁶
Inline fluid sensor




[Click here to watch a video of this case study](#)

Automated dispensing helps security manufacturer increase throughput and quality

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.

Specifications

Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
	Very popular neutral cure, non-corrosive adhesive/sealant, with excellent primerless adhesion. Shear-thinning, non slump paste. Medium						

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil N2034	Flowable, non-corrosive black silicone for technical applications including bonding, sealing, coating, potting and gasketing. Self-levelling with medium hardness when cured, and flame retardant.	25,000	Black	35	Yes	200	-50 to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil N2189	Non-corrosive, neutral cure, hard but flexible silicone. Mineral oil and coolant resistant, with good heat stability and flame retardancy. A particularly good choice in applications such as automotive gasketing. UL94 V-0.		Black	45	Yes	250	up to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil N2199	Highly flexible, translucent silicone which meets the criteria of MIL-SPEC 46146. Neutral cure and good adhesion to many substrates including plastics, glass, metals and ceramic. Cured product has outstanding resistance to weathering, ageing, moisture, and UV light.		Translucent	30		350	-45 to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E4	Soft, non-slump transparent adhesive sealant with low hardness, useful for signage, CIP gasketing and sealing applications. Highly elastic with excellent recovery after compression.		Transparent	15		750	up to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E10	Flowable sealant with excellent heat stability up to 250°C, long-term elasticity under thermal stress, and good mechanical properties. Low hardness. Application: include sealing of heating elements.	8,000	Red	25		300	up to 250°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E14 Red	Non-sag sealant with a broad adhesion profile and excellent heat stability up to 250°C. Medium hardness. Applications include small appliances, FIP gaskets, and HVAC.	1,000,000	Red	32		400	up to 250°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E41	Transparent sealant with excellent adhesion to cured silicone.	100,000	Transparent	40		350	up to 200°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E43 N	Food compliant, high viscosity, fast curing adhesive sealant which cures to a transparent, medium-hard elastomer. High elasticity, tensile strength and tear resistance. Adheres to cured silicone rubber. Temperature resistance up to 200°C.	300,000	Transparent	30		600	-50 to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Elastosil E50 N	Food compliant, transparent silicone for coating and potting applications including textile coatings. Medium hardness, more rigid than E43N.	50,000	Transparent	35		150	up to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Silpuran 4200	Medical-grade, biocompatible acetoxy-curing adhesive sealant which meets the requirements of ISO 10993 and USP Class VI. Fast skin time; medium hardness.	300,000	Translucent	35		300	

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Semicosil 987	Rapid heat-curing black adhesive sealant for electronics applications including CIP and FIP gaskets. High hardness.	350,000	Black	50		200	-50 to 180°C

WACKER Silicone Adhesive Sealants



Product	Characteristics	Viscosity (mPas)	Colour	Hardness (Shore A)	UL94 V-0	Elongation %	Temperature Range
Semicosil 989/1K	General purpose transparent adhesive for the electronics industry. FIPG and CIPG applications. Primerless adhesion to many substrates.	300,000	Transparent	55		200	

For additional specifications, view our [selector guide](#).

Safety Data Sheets

For the latest SDS for this product, please e-mail msds@intertronics.co.uk

Ordering Information

Our technical team are on hand to discuss your application requirements. [Click here](#) to get in touch.

Find out more information on [how to purchase](#).

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