Highly Functional Silicone for Automotive

Shin-Etsu Silicone

Silicone for EV

- Thermal Interface materials
- Case Sealants
- Substrate Coating Materials
- Epoxy Resin Delamination Countermeasure Materials
- Die Bonding Material for Sensors
- Sensor Element Protective Materials
- Insulating Protective Materials
- LOCA

Highly Reliable Silicone Rubbers

- Highly Transparent Materials for Head Lamp Lenses
- Waterproof Sealants, Various Sealing Materials
- Resin and Metal Composite Parts
- Anti-vibration Parts

Highly Functional Silicone for Resins

- Weather Strips
- Urethane Synthetic Leather Sheet
- Dashboard, Glass Channel
- Damper Material for Cup Holder and Storage Box

Silicone for EV

Shin-Etsu Silicone offers products that help increase the reliability of EVs in three areas: Electrification Solutions, Power Devices, and Sensing Infortainment.

Electrification Solutions

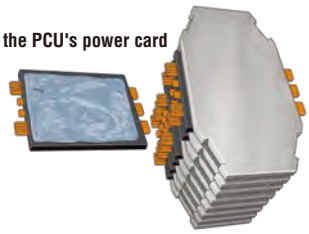
PCU/Lithium Ion Batteries

Heat dissipation of the reactor of the PCU

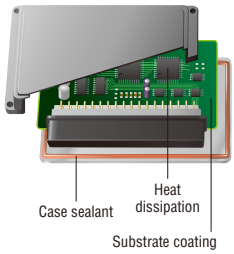
Applications	Product classification	Product name	Features and benefits
Heat dissipation	Liquid rubber	**KE-1867**	Thermal conductivity 2.2 W/m·K, UL-V0 certified, adhesion
		KE-1897S-A/B	Thermal conductivity 2.1 W/m·K, UL-V0 equivalent, flowability, potting
		KE-1899-A/B	Thermal conductivity 2.9 W/m·K, UL-V0 certified, flowability, potting
	Gap filler	**SDP series**	Thermal conductivity 2.9 W/m·K to 6.5 W/m·K, misalignment resistance, long-term reliability
		CLG series	
	Thermal interface insulating silicone rubber sheets	**TC-TA series**	Thermal conductivity 1.0 W/m·K to 8.0 W/m·K, high strength
	Thermal interface silicone soft pads	**TC-CA series**	Thermal conductivity 1.8 W/m·K to 5.2 W/m·K, tolerance-absorbing
		TC-PEN series	Thermal conductivity 3.2 W/m·K to 5.2 W/m·K, weight reduction
		TC-UP8 series	Thermal conductivity 8.0 W/m·K~, tolerance-absorbing
	Thermal softening sheets phase change materials	**PCS series**	Thermal conductivity 1.7 W/m·K to 3.0 W/m·K, thermal softening

Lithium-ion battery heat dissipation

Heat dissipation of the PCU's power card



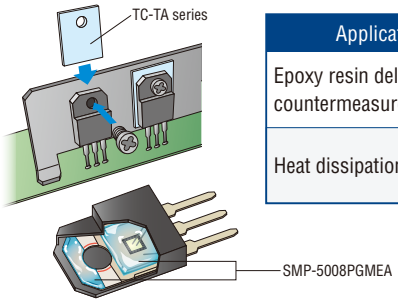
ECU



Applications	Product classification	Product name	Features and benefits
Case sealant	Liquid rubber	**KE-4930-G**	One-component moisture curing
		KE-1875	One-component heat curing
		KE-1189-A/B	Two-component room temperature curing
		X-32-3955	One-component heat curing, sulfurization countermeasures
Substrate coating		**MR-COAT series**	Solvent type, high hardness
		KUV-3433-UV	Solvent-free, UV curing
		X-32-3941	Sulfurization countermeasures
Heat dissipation	Gap filler	**SDP series**	Thermal conductivity 3.5 W/m·K to 6.5 W/m·K
	Thermal interface insulating silicone rubber sheets	**TC-TA series**	Thermal conductivity 1.0 W/m·K to 8.0 W/m·K, high strength
	Thermal interface silicone soft pads	**TC-CA series**	Thermal conductivity 1.8 W/m·K to 5.2 W/m·K, tolerance-absorbing

Power Devices

Epoxy Resin Parts



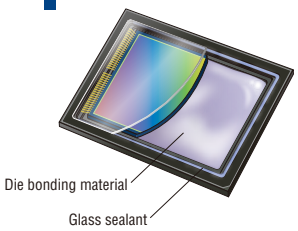
Applications	Product classification	Product name	Features and benefits
Epoxy resin delamination countermeasures	Polyimide silicone	**SMP-5008PGMEA**	Curable at 150°C, excellent adhesion to epoxy resin, low elasticity
Heat dissipation	Thermal Interface Insulating silicone rubber sheets	**TC-TA series**	Thermal conductivity 1.0 W/m·K to 8.0 W/m·K, high strength

IGBT Modules

Applications	Product classification	Product name	Features and benefits
Insulation protection	Gel	**KE-1066-A/B**	Heat resistance, cold resistance, and adhesion
Heat dissipation	Thermal interface oil compounds	**G-777**	Thermal conductivity 3.3 W/m·K, offering a balance of workability, heat resistance and thermal conductivity
	Thermal Interface Insulating silicone rubber sheets	**TC-TA series**	Thermal conductivity 1.0 W/m·K to 8.0 W/m·K, high strength

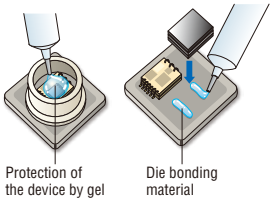
Sensing Infortainment

Image Sensor



Applications	Product classification	Product name	Features and benefits
Die bonding material	Liquid rubber	**KER-4410**	Low cure shrinkage, UV activated curing
Glass sealant and die bonding materials		**KER-6020-F2**	Heat curing, excellent low temperature characteristics
Glass sealant		**KER-4304-3UV**	UV curing

Pressure Sensor



Applications	Product classification	Product name	Features and benefits
Sensor element protection	Gel	**KER-6201, FE-73-BK**	Imparting cold and oil resistance
Die bonding material	Liquid rubber	**FER-3850-D1, KER-6020-F2**	Cold resistance, oil resistance, precision coating is possible.

Display

Applications	Product classification	Product name	Features and benefits
LOCA*	Gel	**X-32-3855**	UV activated curing, one-component type, low discoloration due to heat
Heat dissipation	Thermal Interface Silicone Soft Pads	**TC-CA series**	Thermal conductivity 1.8 W/m·K to 5.2 W/m·K, tolerance-absorbing

* LOCA = Liquid Optical Clear Adhesive

Excellent Characteristics Achieve Improved Reliability of Automotive Parts.

Highly Reliable Silicone Rubbers

Highly Transparent Materials for Head Lamp Lenses

KE-2061 series, KE-2062 series, X-34-4368-A/B

Highly Transparent Liquid Silicone Rubber for LIMS

Features and Benefits

- Combined with high transparency, high heat resistance, flexibility, weather resistance and high strength
- Highly designable, highly transparent parts with complex shapes that are difficult for polycarbonate, acrylic resin, glass, etc. can be molded
- Ideal for lenses for LED lights such as automotive headlights

Waterproof Seals for Wiring Harnesses and Various Seals

KE-2017 series, KE-2019 series

Liquid Silicone Rubber for Secondary Vulcanization-free LIMS

Features and Benefits

- Reduces the amount of low-molecular-weight siloxane that can cause electrical contact failures.
- No secondary vulcanization is required, and the production process can be shortened.
- Die fouling during molding is improved, and the number of die cleaning times is reduced.
- Lineup of oil bleed type ideal for waterproof seal of wiring harness and low compression set type ideal for various seals

Resin Composite Parts and Metal Composite Parts

KE-2097 series, KE-2098 series

Self-adhesive Liquid Silicone Rubber for LIMS

Features and Benefits

- It has high adhesion to various resins (i.e. polycarbonate, nylon, and PBT), and metals (i.e. SUS and iron) with no primer. And it can be integrally molded with these substrates.
- Cost reduction by shortening the production process is possible.
- Environmentally friendly as there is no need for primers

Various anti-vibration components (i.e. powertrain support mounts)

KE-X01EM-U series, KE-55X0-U series

Millable Silicone Rubber for Anti-vibration

Features and Benefits

- It has stable and excellent anti-vibration characteristics in a wide temperature range from low temperature to high temperature, which is difficult to realize by organic rubber.
- Lineup of low dynamic magnification type with low frequency dependence of elastic modulus E' and high damping type with large loss factor
- Absorbing and shutting off vibrations from power trains and other devices transmitted to the vehicle body, realizing a comfortable ride

For Comfortable Driving by Enhancing the Function of the Resin

Highly Functional Silicone for Resins

Window Frames (Weather Strips), Interior Materials (Dashboards) and Glass Channels

Used as Resin Hybridization Material

X-22-2101, X-25-5010

Master Batch

Features and Benefits: Improvement of wear resistance, reduction of squeaking noise, and imparting weatherability

Weather Strips

Used as Coating Agent

KM-9749, X-52-1133

Silicone Emulsion

Features and Benefits: Imparting slip properties, water-based product

Damper Material for Cup Holder and Storage Box

Used as Damper Material

KF-96H series

Dimethyl Silicone Fluid

Features and Benefits: Stable damper function

Urethane Synthetic Leather Sheet

Used as Resin Hybridization Material

KF-6001 series, X-22-176 series

Carbinol-modified Silicone Fluid

Features and Benefits: Improvement of texture, imparting weatherability, etc.

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The Development and Manufacture of Shin-Etsu Silicones are based on the following registered international quality and environmental management standards.

Gunma Complex	ISO 9001 (JCQA-0004)	ISO 14001 (JCQA-E-0002)
Naoetsu Plant	ISO 9001 (JCQA-0018)	ISO 14001 (JCQA-E-0064)
Takefu Plant	ISO 9001 (JQA-0479)	ISO 14001 (JQA-EM0298)

https://www.shinetsusilicone-global.com/

This is an edited version of the product data released on Sep. 2021.