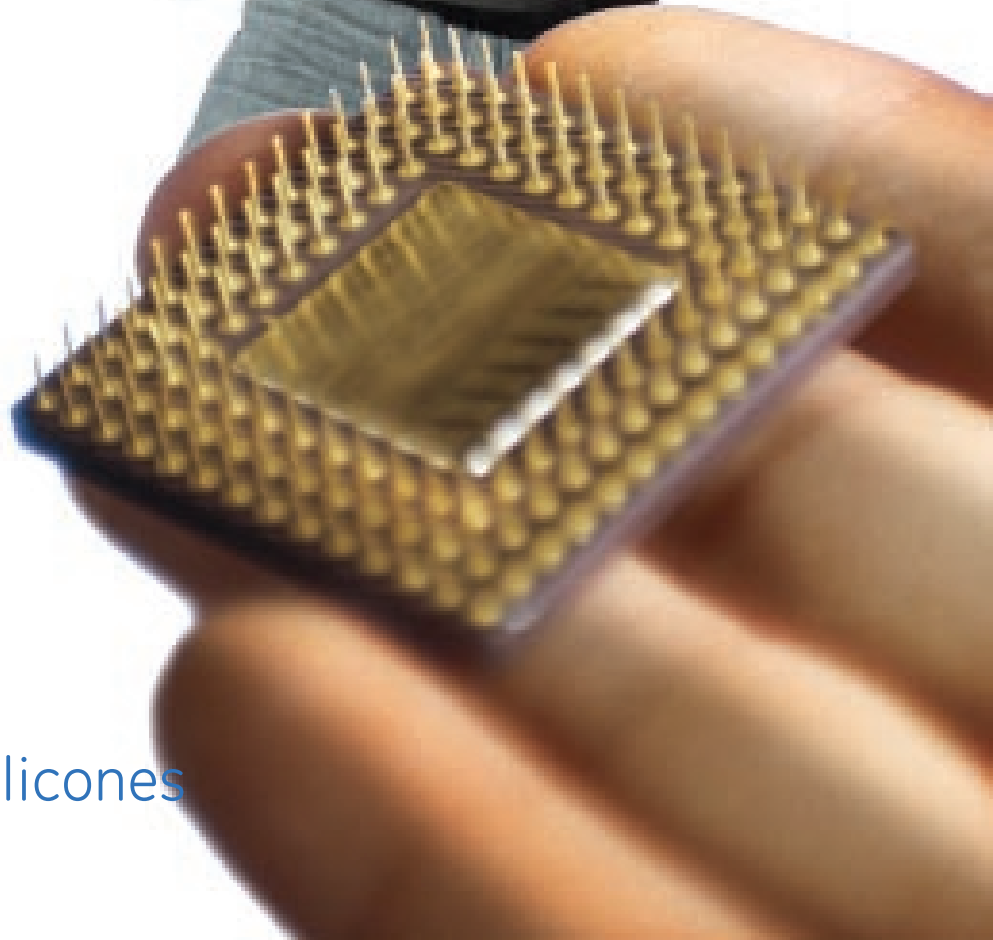
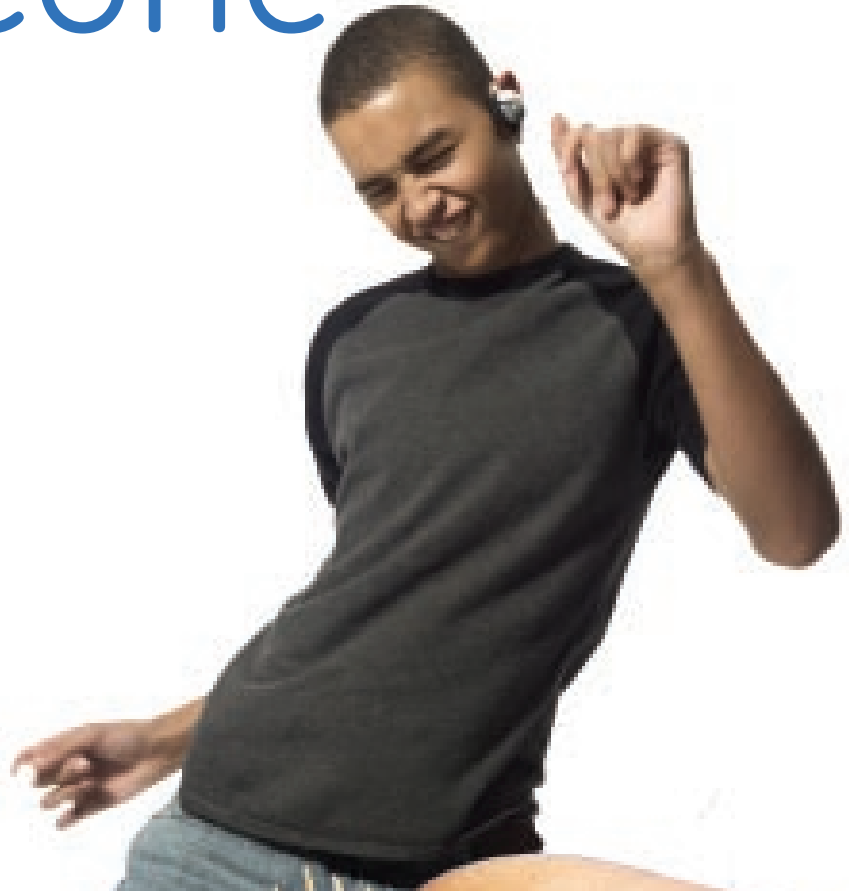


GE Advanced Materials  
Silicones

# RTV Silicone Rubber

Product selector guide



GE Bayer Silicones

**R**Room  
**T**Temperature  
**V**Vulcanizing

RTV Silicone is a liquid silicone rubber developed for potting, adhesion, sealing, and coating for use in electronic, electrical, automotive, and general industrial applications. GE Advanced Materials Silicones applies its many years of experience and technical excellence in the development of its RTV products, and offers its customers a level of performance critical to achieving long term integrity and reliability in a wide range of applications.

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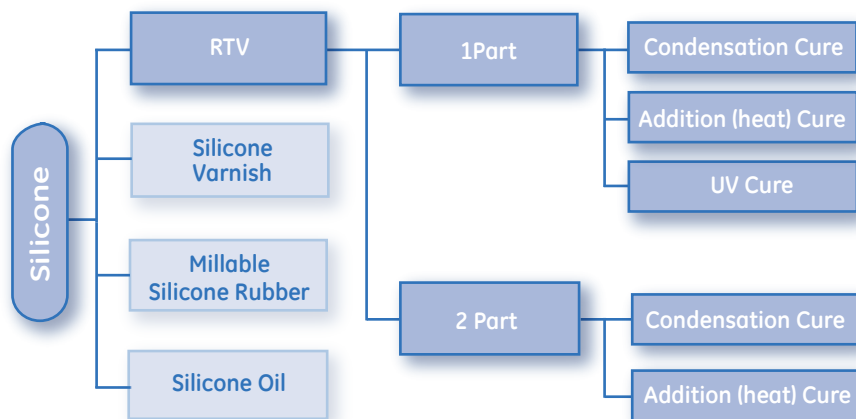
## RTV Silicone Profile

RTV silicones consist of Condensation Cure, Addition (heat) Cure, and UV Cure grades. Selection of the appropriate type of RTV depends upon the required manufacturing process, handling requirements, curing conditions, equipment, and material properties.

**Condensation Cure RTV:** Cures to form an elastic silicone rubber when exposed to moisture in the environment at room temperatures. One part RTVs are categorized into Alkoxy Oxime, or Acetoxy, based upon the by-products that occur during cure.

**Addition Cure RTV:** Cures to form an elastic silicone rubber when exposed to either heat or room temperature.

**UV Cure RTV:** Cures to form and elastic silicone rubber when exposed to UV light.



## Benefits and Characteristics

Property	Silicone RTV	Epoxy	Urethane
Temperature Range	-50 ~ +200°C	-50 ~ +150°C	-30 ~ +120°C
Heat Resistance	Excellent	Poor	Poor
Flame Retardancy*	Excellent	None	None
UV Stability	Excellent	Poor	Poor
Ozone Stability	Excellent	Poor	Poor
Modulus	Low	High	High

\* As a base material, silicone demonstrates flame retardant properties comparable to UL94HB. Refer to page 22 for information on UL recognized products.

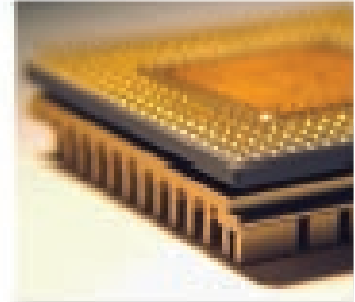
RTV silicones exhibit high performance under many harsh operating environments. They also provide strong primerless adhesion to many substrates including metals, plastics, glass, and ceramics.



# Industries / Applications

## Electronics

GE Advanced Materials Silicones RTVs are used extensively in the Electronic and Electric industries to ensure long term, reliable performance of critical components and electronic circuit assemblies. Silicone adhesives, sealants, conformal coatings, potting gels / rubber, encapsulants, and thermal management materials play a vital role in many of today's demanding electronic applications.



### Typical Applications:

- Power Module
- Converter
- Solar Cell
- Hybrid IC
- Micro-Electronic
- PCB Fixing & Sealing
- High Voltage Part Insulation
- Sensors
- Membrane Switches
- LEDs
- Photo Couplers

## Home Appliances

RTVs are commonly used in a wide variety of consumer goods and home appliance products. In addition to strong adhesion performance to many substrates, silicones provide heat resistance, flame retardancy, and moisture / dirt protection that make silicone an ideal material for a variety of sealing, bonding, and insulation applications.

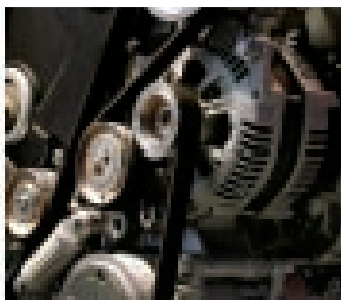


### Typical Applications:

- Flat Panel Display Sealing
- CRT Wedges, Bases, Anode
- Microwave Oven Doors, Box Sealing
- Steam Iron Plate Seal
- Air Conditioner Units
- Gas Stoves
- Heaters, Ovens
- Control Panel Insulation
- PCB Fixing & Sealing

## Automotive

The Automotive Industry plays a critical role in integrating new electronic technologies. As more and more components migrate to electronic solutions, RTVs play an increasingly vital role in delivering material solutions to provide design flexibility, protection, and long-term component reliability under harsh operating conditions.

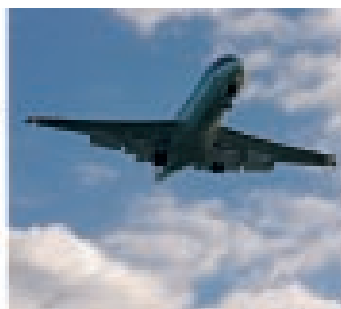


### Typical Applications:

- ECU Potting, Sealing, Coating
- Wire Connector Potting
- Alternator Voltage Regulators
- Actuators
- HVAC Systems
- Sensor Potting, Sealing
- Air Flow Meters
- Pressure Sensors
- Temperature Sensors
- Rotation Sensors
- Ultrasonic Sensors
- Headlamp Seals
- LED Lamp Potting
- Airbag Coating
- Engine FIPG Gaskets

## Aerospace

Electronic component and frame assembly needs in the Aerospace Industry are served through RTV adhesives, potting, coating, encapsulation, and sealing materials that withstand stress and temperature extremes.



### Typical Applications:

- Cockpit Instrument
- Electronic Power Equipment
- Circuit and Terminal Protection
- Wire Sealant
- Engine Gasketin
- Engine Electronics Potting
- Cargo Door Seal
- Window Assembly Sealants
- Weather Strip Adhesive
- Lighting Sealants
- Ventilation Ducts
- General Maintenance

# Selection Guide

## Product Index

Type		Product Code	Cure Type		Characteristic	Application			
						Adhesive / Seal	Coating	Potting	Thermal Mgmt.
ONE PART	General Purpose	TSE392	Condensation	Alkoxy	Non-Flowable, Low Volatility	P.9			
		TSE3925	Condensation	Alkoxy	Non-Flowable, Low Volatility	P.9			
		TSE397	Condensation	Alkoxy	Flowable	P.9	P.13		
		TSE3971	Condensation	Alkoxy	Flowable	P.9	P.13		
		TSE3972	Condensation	Alkoxy	Flowable	P.9	P.13		
		TSE3975	Condensation	Alkoxy	Flowable, Low Volatility	P.10	P.13		
		TSE399	Condensation	Alkoxy	Flowable		P.13	P.15	
		TSE3991	Condensation	Alkoxy	Flowable		P.13	P.15	
		TSE3995	Condensation	Alkoxy	Flowable, Low Volatility		P.13	P.15	
		TSE3996	Condensation	Alkoxy	Flowable, Low Volatility		P.13	P.15	
		RTV142	Condensation	Alkoxy	Flowable, UL94HB	P.9			
		RTV160	Condensation	Alkoxy	Flowable, UL94HB	P.9			
		RTV162	Condensation	Alkoxy	Non-Flowable, UL94HB	P.10			
		RTV5242/5243/5249	Condensation	Alkoxy	Non-Flowable, UL94HB	P.10			
		IS802/803/806/808	Condensation	Acetoxy	Non-Flowable, UL94HB	P.10			
		RTV102/103/108/109	Condensation	Acetoxy	Non-Flowable	P.10			
		RTV112/118	Condensation	Acetoxy	Flowable	P.10			
		RTV1473	Condensation	Acetoxy	Non-Flowable, Oil Resistance	P.10			
		RTV157	Condensation	Acetoxy	Non-Flowable	P.10			
		RTV159	Condensation	Acetoxy	Non-Flowable	P.10			
		FRV1106	Condensation	Acetoxy	Non-Flowable	P.10			
		RTV6424	Addition	Heat	Non-Flowable	P.11			
		TSE3051	Addition	Heat	Gel		P.15		
		TSE3212	Addition	Heat	Semi-Flowable	P.11	P.14		
		TSE322	Addition	Heat	Flowable	P.11			
		TSE322S	Addition	Heat	Semi-Flowable, UL94HB	P.11			
		TSE3221S	Addition	Heat	Flowable	P.11	P.14		
		TSE325	Addition	Heat	Flowable		P.14		
		TSE3250	Addition	Heat	Flowable		P.14	P.15	
		TSE3251	Addition	Heat	Semi-Flowable		P.14		
		TSE3251-C	Addition	Heat	Semi-Flowable		P.14		
		TSE3251H	Addition	Heat	Semi-Flowable		P.15		
		TSE3251H-C	Addition	Heat	Semi-Flowable		P.15		
	Flame Retardant	TSE3854D	Condensation	Alkoxy	Non-Flowable, UL94 V-0	P.9			
		TSE3941M	Condensation	Alkoxy	Non-Flowable	P.9	P.13		P.19
		TSE3941	Condensation	Alkoxy	Non-Flowable, UL94 V-1	P.9			P.19
		TSE3944	Condensation	Alkoxy	Semi-Flowable, UL94 V-0, Low Volatility	P.9	P.13		
		TSE3945	Condensation	Alkoxy	Non-Flowable, UL94 V-0, Low Volatility	P.9			
		TSE3946	Condensation	Alkoxy	Non-Flowable, UL94 V-1, Low Volatility	P.9			P.19
	Heat Resistant	XE11-A5133S	Condensation	Alkoxy	Flowable, UL94 V-1, Low Volatility		P.13	P.15	P.19
		TSE3976-B	Condensation	Alkoxy	Flowable, UL94HB, Low Volatility	P.10	P.13		
		RTV106	Condensation	Acetoxy	Non-Flowable	P.10			
		RTV116	Condensation	Acetoxy	Flowable, Self-Leveling	P.10			
		TSE326	Addition	Heat	Flowable	P.11			
		TSE326MEX	Addition	Heat	Flowable	P.11			
		TSE3260	Addition	Heat	Flowable, UL94HB	P.11			
		TSE3261-G	Addition	Heat	Flowable	P.11			

# Product Index

Type		Product Code	Cure Type		Characteristic	Application			
						Adhesive / Seal	Coating	Potting	Thermal Mgmt.
ONE PART	Thermally Conductive	TSE3941	Condensation	Alkoxy	Non-Flowable, UL94 V-1	P.9			P.19
		TSE3941M	Condensation	Alkoxy	Flowable	P.9	P.13		P.19
		TSE3946	Condensation	Alkoxy	Non-Flowable, UL94 V-1, Low Volatility	P.9			P.19
		XE11-A5133S	Condensation	Alkoxy	Flowable, UL94 V-1, Low Volatility		P.13		P.19
		XE11-B5320	Condensation	Alkoxy	Non-Flowable, Low Volatility	P.10			P.19
		TSE3280-G	Addition	Heat	Flowable	P.11			P.19
		TSE3281-G	Addition	Heat	Flowable, High Thermal Conductivity	P.11			P.19
		TSE3282-G	Addition	Heat	Flowable, High Thermal Conductivity	P.11			P.19
		YG6111	-	-	Silicone Grease, Low Volatility				P.20
		YG6240	-	-	Silicone Grease, Low Volatility				P.20
		YG6260	-	-	Silicone Grease, Low Volatility				P.20
		YG6260V	-	-	Silicone Grease, Low Volatility				P.20
		TSK5303	-	-	Silicone Grease, Low Volatility				P.20
	Junction Coating	TSJ3155	Addition	Heat	Rubber, Semi-Flowable		P.18		
		TSJ3156	Addition	Heat	Rubber, Semi-Flowable		P.18		
		TSJ3185	Addition	Heat	Gel, Semi-Flowable		P.18		
		TSJ3186	Addition	Heat	Gel, Semi-Flowable		P.19		
		TSJ3187	Addition	Heat	Gel, Semi-Flowable		P.18		
TWO PART	General Purpose	TSE3364	Condensation	Room Temperature	Flowable, UL94 V-0	P.12		P.17	
		TSE3663	Condensation	Room Temperature	Flowable	P.12		P.17	
		RTV11	Condensation	Room Temperature	Flowable			P.17	
		RTV511	Condensation	Room Temperature	Flowable			P.17	
		RTV560	Condensation	Room Temperature	Flowable			P.16	
		RTV566	Condensation	Room Temperature	Flowable			P.17	
		RTV567	Condensation	Room Temperature	Flowable			P.16	
		RTV577	Condensation	Room Temperature	Flowable			P.17	
		RTV8111	Condensation	Room Temperature	Flowable			P.17	
		RTV8112	Condensation	Room Temperature	Flowable			P.17	
		RTV8262	Condensation	Room Temperature	Flowable			P.17	
		RTV60	Condensation	Room Temperature	Flowable			P.16	
		RTV88	Condensation	Room Temperature	Non-Flowable			P.16	
		D1-SEA210	Condensation	Room Temperature	Non-Flowable, UL94HB	P.12			
		RTV6428	Addition	Heat / Room Temperature	Flowable			P.16	
		RTV615	Addition	Heat	Flowable			P.16	
		RTV655	Addition	Heat	Flowable			P.16	
		RTV6166	Addition	Heat / Room Temperature	Semi-Flowable			P.16	
		RTV6196	Addition	Heat / Room Temperature	Semi-Flowable			P.16	
		LVG342	Addition	Heat	Flowable, Low Volatility	P.12			
		TSE3032	Addition	Heat	Flowable, Non-Adhesive			P.17	
		TSE3033	Addition	Heat	Flowable		P.14	P.17	
		TSE3062	Addition	Heat	Flowable, Gel,			P.15	
		XE14-7393	Addition	Heat	Flowable, Gel, Low Volatility			P.16	
		TSE350	Condensation	Room Temperature	Flowable			P.17	
		TSE3070	Addition	Heat	Flowable, Gel, High-Elongation			P.16	
		TSE3320	Addition	Room Temperature	Semi-Flowable	P.12			
		TSE3380	Addition	Heat	Flowable, High Thermal Conductivity	P.12			P.18
	Flame Retardant	TSE3331	Addition	Heat	Flowable, UL94 V-0		P.14	P.17	P.19
		TSE3331K-EX	Addition	Heat	Flowable, Non-Adhesive, UL94 V-0		P.14	P.17	P.19
		TSE3431-H	Addition	Heat	Flowable, Non-Adhesive, UL94 V-0			P.17	
		TSE3080	Addition	Heat	Semi-Flowable, UL94 V-1			P.15	P.19
		TSE3081	Addition	Heat	Semi-Flowable, UL94 V-1			P.15	P.19
		XE14-B7892	Addition	Heat	Flowable, Non-Adhesive, UL94 V-0			P.17	
	Thermally Conductive	TSE3331	Addition	Heat	Flowable, UL94 V-0		P.14	P.17	P.19
		TSE3331K-EX	Addition	Heat	Flowable, UL94 V-0		P.14	P.17	P.19
		TSE 3080	Addition	Heat	Semi-Flowable,			P.15	
		TSE 3081	Addition	Heat	Semi-Flowable			P.15	
		TSE3380	Addition	Heat	Flowable, High Thermal Conductivity	P.12			P.18
	Junction Coatings	TSJ3175	Addition	Heat	Gel, Semi-Flowable		P.18		
		XE14-B5778	Addition	Heat	Rubber, Semi-Flowable		P.18		

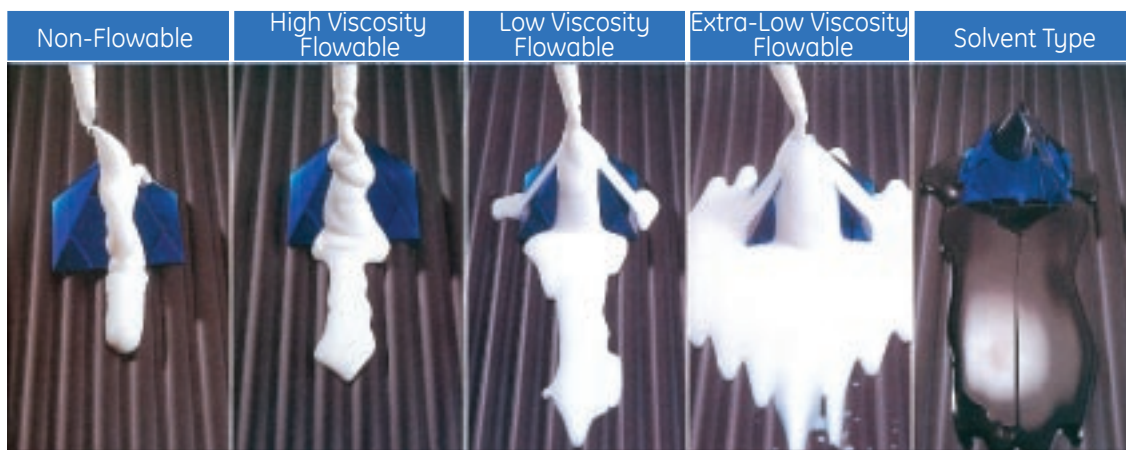
## 1 Part Condensation Cure Property and Feature Matrix

Feature Property	Standard Grades				Low Volatility Grades			
	General Purpose	Flame Retardant	Heat Resistant	Thermally Conductive	General Purpose	Flame Retardant	Heat Resistant	Thermally Conductive
Non-Flowable	TSE392	TSE3854D		TSE3941	TSE3925	TSE3945		TSE3946
	RTV 162				RTV 142	TSE3946		
		TSE3941						
	IS802/803/806/808		RTV106					
	RTV102/103/108/109							
	RTV1473							
	RTV157							
	RTV159							
	RTV1106							
Semi-Flowable						TSE3944		
Flowable	High Viscosity	TSE397		TSE3941M	TSE3975	XE11-A5133S	TSE3976-B	XE11-A5133S
		TSE3971						
		TSE3972						
		RTV160						
	Medium Viscosity	RTV112		RTV116				
	Low Viscosity	TSE399			TSE3995			
	Extra Low Viscosity	TSE3991			TSE3996			

Alkoxy

Acetoxy

RTV silicone adhesives and sealants are widely used in adhesion, coating, and potting applications. Viscosity and flowability of the material are key factors in the selection of the right RTV grade for each application. GE Advanced Materials Silicones offers a wide range of grades in various levels of flowability.





## Adhesion and Sealing

Adhesion and Sealing		1 Part Condensation Cure					
Cure Type		Alkoxy					
Product Code		RTV142	RTV160	TSE3854D	TSE392	TSE3925	TSE3941
Feature		General Purpose	General Purpose	Flame Retardant	General Purpose	General Purpose Low Volatility	Flame Retardant
Property		Non-Flowable Low Volatility	Flowable UL94HB	Non-Flowable	Non-Flowable	Non-Flowable	Non-Flowable
Viscosity (23°C)	Pas {P}	Spreadable paste	38 {380}	-	-	-	-
Tack Free Time	min	240	240	15	5	5	5
Density (23°C)	g/cm <sup>3</sup>	1.09	1.04	1.32	1.04	1.04	1.65
Hardness	(shore A)	34	25	40	26	30	60
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	3.8 {39}	1.9 {19}	2.7 {28}	1.6 {16}	1.6 {16}	2.9 {30}
Elongation	%	400	230	260	430	350	100
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	-	-	2.2 {22}	1.3 {13}	1.3 {13}	1.4 {14}
Linear Expansion	1/K	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>	-	2.1x10 <sup>-4</sup>	-	1.6x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.21	0.21	0.34 {8.0x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.83 {2.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	4.5x10 <sup>15</sup>	4x10 <sup>14</sup>	2.0x10 <sup>14</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	4.0x10 <sup>14</sup>
Dielectric Strength	kV/mm	20	20	25	22	22	22
Dielectric Constant	(60Hz)	2.8	2.8	3.1	2.9	2.9	4.0
Dissipation Factor	(60Hz)	0.001	0.001	0.02	0.005	0.005	0.04
Remarks		-	-	UL94 V-0	UL94HB	-	UL94 V-1

Adhesion and Sealing		1 Part Condensation Cure						
Cure Type		Alkoxy						
Product Code		TSE3941M	TSE3944	TSE3945	TSE3946	TSE397	TSE3971	TSE3972
Feature		General Purpose	Flame Retardant Low Volatility	Flame Retardant Low Volatility	Flame Retardant Low Volatility	General Purpose	General Purpose	General Purpose
Property		Flowable	Semi-Flowable	Non-Flowable	Non-Flowable	Flowable	Flowable	Flowable
Viscosity (23°C)	Pas {P}	50 {500}	-	-	-	50 {500}	100 {1000}	50 {500}
Tack Free Time	min	5	5	5	5	10	10	5
Density (23°C)	g/cm³	1.64	1.31	1.45	1.70	1.04	1.04	1.04
Hardness	(shore A)	63	38	51	68	20	16	15
Tensile Strength	MPa {kgf/cm²}	3.2 {33}	1.5 {15}	2.9 {30}	3.9 {40}	1.2 {12}	1.5 {15}	1.3 {13}
Elongation	%	70	170	200	100	300	350	350
Adhesive Strength	MPa {kgf/cm²}	1.4 {14}	1.0 {10}	1.5 {15}	1.6 {16}	1.0 {10}	1.2 {12}	1.2 {12}
Linear Expansion	1/K	-	-	-	-	2.1x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms °C)}	0.83 {2.0x10 <sup>-3</sup> }	0.36 {8.0x10 <sup>-4</sup> }	0.34 {8.0x10 <sup>-4</sup> }	0.83 {2.0x10 <sup>-3</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }
Volume Resistivity	ohm cm	4.0x10 <sup>14</sup>	1.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	4.0x10 <sup>14</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	21	22	22	23	22	21	21
Dielectric Constant	(60Hz)	4.0	3.8	4.5	4.0	2.9	2.9	2.9
Dissipation Factor	(60Hz)	0.04	0.02	0.05	0.04	0.005	0.005	0.005
Remarks		-	UL94 V-0	UL94 V-0	UL94 V-1	-	-	-

Adhesion and Sealing

Adhesion and Sealing Cure Type		1 Part Condensation Cure					
		Alkoxy				Acetoxy	
Product Code		TSE3975	TSE3976-B	XE11-B5320	RTV162	RTV5242 RTV 5243/RTV 5249	IS802/803/808  IS806
Feature		General Purpose Low Volatility	Heat Resistant Low Volatility	Thermally Conductive Low Volatility	General Purpose	General Purpose	General Purpose
Property		Flowable	Flowable	Non-Flowable	UL94HB	UL94HB	Non-Flowable UL94HB
Viscosity (23°C)	Pas {P}	33 {330}	100 {1000}	-	Non Flowable*	-	spreadable paste*
Tack Free Time	min	10	5	5	240	45	25
Density (23°C)	g/cm³	1.05	1.08	2.59	1.09*	1.5*	1.04*
Hardness	(shore A)	25	30	80	35	40	23
Tensile Strength	MPa {kg/cm²}	1.2 {12}	1.7 {17}	3.6 {37}	3.8 {39}	2.2 {22}	-
Elongation	%	220	170	40	400	425	450
Adhesive Strength	MPa {kg/cm²}	1.2 {12}	1.8 {18}	1.3 {13}	-	-	1.0 {10}
Linear Expansion	1/K	-	-	-	27x10 <sup>-5</sup>	-	30x10 <sup>-5</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.21 {5.0x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	1.3 {3.1x10 <sup>-3</sup> }	0.21	-	0.21
Volume Resistivity	ohm cm	2.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	3.0x10 <sup>15</sup>	3.0x10 <sup>15</sup>	2.5x10 <sup>14</sup>
Dielectric Strength	kV/mm	23	20	17	18	20	20
Dielectric Constant	(60Hz)	2.9	3.5	2.6	2.8	2.8	2.9
Dissipation Factor	(60Hz)	0.005	0.01	0.005	0.001	0.001	0.0026

\*Tested at 25°C

Adhesion and Sealing Cure Type		1 Part Condensation Cure					
		Acetoxy					
Product Code		RTV106	RTV102/103 RTV108/109	RTV116	RTV112/118	RTV157	RTV159  FRV1106
Feature		Heat Resistant	General Purpose	Heat Resistant	General Purpose	High Strenght	High Strenght
Property		Non-Flowable	Non-Flowable	Flowable Self-Leveling	Flowable	Non-Flowable	Non-Flowable
Viscosity (25°C)	Pas {P}	Soft, spreadable paste	25 {250}	Red	20 {200}	Paste	Paste
Tack Free Time	min	20	20	30	20	45	45
Density (25°C)	g/cm³	1.07	1.05	1.09	1.05	1.09	1.09
Hardness	(shore A)	30	30	20	25	28	28
Tensile Strength	MPa {kgf/cm²}	2.6 {26}	2.8{29}	2.5{25}	2.3{23}	6.9{70}	7.2{73}
Elongation	%	400	450	350	325	825	825
Adhesive Strength	MPa {kgf/cm²}	1.4	-	0.7	-	-	-
Linear Expansion	1/K	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>	27x10 <sup>-5</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.21	0.21	0.21	0.21	0.21	0.21
Volume Resistivity	ohm cm	3.0x10 <sup>14</sup>	3.1x10 <sup>15</sup>	2.0x10 <sup>14</sup>	6.1x10 <sup>14</sup>	7.5x10 <sup>14</sup>	1.1x10 <sup>15</sup>
Dielectric Strength	kV/mm	20	20	16	16	20.7	19.7
Dielectric Constant	(60Hz)	2.8	2.8	2.8	2.8	2.9	2.6
Dissipation Factor	(60Hz)	0.001	0.001	0.001	0.001	0.0009	0.0007

† tested at 1 kHz

## Adhesion and Sealing

Adhesion and Sealing Cure Type	1 Part Condition Cure	1 Part Addition Cure						
	Acetoxy	Heat Cure						
Product Code	RTV1473	TSE3212	TSE322	TSE322S	TSE3221S	TSE326	TSE326MEX	TSE3260
Feature	General Purpose	General Purpose	General Purpose	General Purpose	General Purpose	Heat Resistant	General Purpose	Heat Resistant
Property	Non-Flowable Oil Resistance	Semi-Flowable	Flowable	Non-Flowable	Flowable	Flowable	Flowable	Flowable
Appearance	Soft paste	White	Light Blue, Black	Light Blue	Translucent	Reddish Brown	Reddish Brown	Reddish Brown
Viscosity (23°C)	Pas {P}	280 {2800}	180 {1800}	70 {700}	58 {580}	28 {280}	16 {160}	23 {230}
Cure condition	°C/Hr	25	150/1	150/1	150/1	150/1	200/0.5	150/1
Density (23°C)	g/cm <sup>3</sup>	1.06*	1.26	1.27	1.26	1.45	1.46	1.34
Hardness	(shore A)	30	52	45	37	28	43	38
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	3.1{31}	3.7 {38}	3.4 {35}	3.6 {37}	2.8 {29}	3.4 {35}	2.9 {30}
Elongation	%	500	240	230	230	370	170	180
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	1.4 {14}	2.6 {26}	2.5 {25}	2.5 {25}	2.5 {25}	2.0 {20}	1.5
Linear Expansion	1/K	-	1.9x10 <sup>-4</sup>	1.9x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	1.7x10 <sup>-4</sup>	1.1x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	-	0.29 {6.9x10 <sup>-4</sup> }	0.29 {6.9x10 <sup>-4</sup> }	0.29 {6.9x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.41 {9.7x10 <sup>-4</sup> }	0.41
Volume Resistivity	ohm cm	-	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	6.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	-	20	20	25	23	22	22
Dielectric Constant	(60Hz)	-	3.2	3.1	3.1	2.8	3.3	3.3
Dissipation Factor	(60Hz)	-	0.001	0.006	0.006	0.001	0.02	0.02
Flame Retardant	-	-	-	UL94V1	-	-	-	UL94HB ULTI 190°C

\*Tested at 25°C

Adhesion and Sealing Cure Type	1 Part Addition Cure				
	Heat Cure				
Product Code	TSE3261-G	TSE3280-G	TSE3281-G	TSE3282-G	RTV6424
Feature	Heat Resistant	Thermal Conductive	High Thermal Conductivity	High Thermal Conductivity	General Purpose
Property	Flowable	Flowable	Flowable	Flowable	Non-Flowable
Appearance	Gray	Gray	Gray	Gray	White
Viscosity (23°C)	Pas {P}	80 {800}	60 {600}	20 {200}	Paste*
Tack Free Time	min	150/1	150/1	150/1	150/1
Density (23°C)	g/cm <sup>3</sup>	1.48	2.10	2.70	2.70
Hardness	(shore A)	54	62	84	80
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	4.9 {50}	3.2 {33}	4.5 {46}	4.0 {41}
Elongation	%	160	110	50	50
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	1.8 {18}	2.0 {20}	2.5 {25}	2.5 {25}
Linear Expansion	1/K	1.7x10	2.2x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.41 {9.7x10 <sup>-4</sup> }	0.88 {2.1x10 <sup>-3</sup> }	1.68 {4.0x10 <sup>-3</sup> }	2.0 {4.8x10 <sup>-4</sup> }
Volume Resistivity	ohm cm	2.0x10 <sup>15</sup>	2.5x10 <sup>14</sup>	4.8x10 <sup>14</sup>	4.8x10 <sup>14</sup>
Dielectric Strength	kV/mm	22	21	15	23
Dielectric Constant	(60Hz)	3.3	4.3	5.2	5.5
Dissipation Factor	(60Hz)	0.02	0.002	0.002	0.001

\*Tested at 25°C

Adhesion and Sealing

Adhesion and Sealing		2 Part Addition Cure		
Cure Type		Room Temperature Cure		
Product Code		TSE3320	TSE3380	LVG342
Feature		General Purpose	High Thermal Conductivity	Low Volatile
Property		Semi-Flowable	Flowable	Thixo Paste
Appearance		White	Grey	White
Mixing Ratio ((A):(B))		100:100	100:100	10:1
Viscosity (after mixing)	Pas{P}	65 {650}	40 {400}	Thixotropic paste
Pot Life	(23°C) hr	4	8	12*
Curing Conditions	°C/Hr	100/1.0	160/0.6	150/1
Density (23°C)	g/cm³	1.54	2.70	1.19*
Hardness	(shore A)	70	70	40
Tensile Strength	MPa {kgf/cm²}	5.9 {60}	2.6 {26}	4.5 {46}
Elongation	%	100	100	275
Adhesive Strength	MPa {kgf/cm²}	2.0 {20}	1.6 {16}	-
Linear Expansion	1/K	1.7x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	-
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.63 {1.5x10 <sup>-4</sup> }	1.68 {4.0x10}	-
Volume Resistivity	ohm cm	1.5x10 <sup>15</sup>	2.1x10 <sup>6</sup>	1.1x10 <sup>14</sup>
Dielectric Strength	kV/mm	23	16	20
Dielectric Constant	(60Hz)	3.3	6.7	-
Dissipation Factor	(60Hz)	0.0007	0.002	-
Frequency Tested		-	-	-
*Tested at 25°C				

Adhesion and Sealing		2 Part Condensation Cure		
Cure Type		Room Temperature		
Product Code		TSE3663	TSE3664	D1-SEA210
Feature		Low viscosity/ Self Bonding	Flame Retardant	Self Bonding
Property		Flowable	Flowable UL94 V-0	Non-Flowable
Appearance		Off-White	Grey	Dark Grey
Mixing Ratio ((A):(B))		100:2	100:7.5	100:8
Viscosity (after mixing)	Pas{P}	4.0 {40}	3.0 {30}	Thixotropic paste
Tack Free Time	min.	-	-	35
Pot Life	(23°C) hr	0.5	0.1	0.6*
Curing Conditions	°C/Hr	23/72	23/72	RT/24
Density (23°C)	g/cm³	1.19	1.41	-
Hardness	(shore A)	35	65	37
Tensile Strength	MPa {kgf/cm²}	1.4 {14}	4.0{40}	2.1{21}
Elongation	%	130	-	255
Linear Expansion	1/K	1.9x10 <sup>-4</sup>	0.42 }1.0x10 <sup>-3</sup> }	-
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.29	-	-
Volume Resistivity	ohm cm	1.0x10 <sup>15</sup>	5x10 <sup>15</sup>	-
Dielectric Strength	kV/mm	20	26	-
Dielectric Constant	(60Hz)	3.1	3.1	-
Dissipation Factor	(60Hz)	0.025	0.01	-
*Tested at 25°C				

## Coating Silicones

Coating Silicones		1 Part Condensation Cure						
		Alkoxy						
Cure Type								
Product Code		TSE3941M	TSE3944	TSE397	TSE3971	TSE3972	TSE3975	TSE3976-B
Feature		General Purpose	Flame Retardant Low Volatility	Fast Cure	Fast Cure	Fast Tack Free	Low Volatility	Heat Resistant Low Volatility
Property		Flowable	Paste	Semi-Flowable	Semi-Flowable	Flowable	Flowable	Flowable
Viscosity (23°C)	Pas {P}	50 {500}	-	50 {500}	100 {1000}	50 {500}	33 {330}	100 {1000}
Tack Free Time	min	5	5	10	10	5	10	5
Density (23°C)	g/cm³	1.64	1.31	1.04	1.04	1.04	1.05	1.08
Hardness	(shore A)	63	38	20	16	15	25	30
Tensile Strength	MPa {kgf/cm²}	3.2 {33}	1.5 {15}	1.2 {12}	1.5 {15}	1.3 {13}	1.2 {12}	1.7 {17}
Elongation	%	70	170	360	350	350	220	170
Adhesive Strength	MPa {kgf/cm²}	1.4 {14}	1.0 {10}	1.0 {10}	1.2 {11}	1.2 {10}	1.2 {12}	1.8 {18}
Linear Expansion	1/K	-	-	2.1x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	2.1x10 <sup>-4</sup>	-	-
Thermal Conductivity	W/(mK) {cal/(cm²°C)}	0.83 {2.0x10 <sup>-3</sup> }	0.36 {8.0x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.21 {5.0x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }
Volume Resistivity	ohm cm	4.0x10 <sup>14</sup>	1.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	21	22	22	21	21	23	20
Dielectric Constant	(60Hz)	4.0	3.8	2.9	2.9	2.9	2.9	3.5
Dissipation Factor	(60Hz)	0.04	0.02	0.005	0.005	0.005	0.005	0.01
Flame Retardant		-	UL94 V-0	-	-	-	-	UL94HB

Coating Silicones		1 Part Condensation Cure				
Cure Type		Alkoxy				
Product Code		TSE399	TSE3991	TSE3995	TSE3996	XE11-A5133S
Feature		Fast Cure	Ultra Low viscosity	Fast Cure Low Volatility	Fast Cure Low Volatility	Flame Retardant Low Volatility
Property		Flowable	Flowable	Flowable	Flowable	Flowable
Viscosity (23°C)	Pas {P}	2.5 {25}	1.5 {15}	2.5 {25}	1.7 {17}	60 {600}
Tack Free Time	min	10	10	10	10	10
Density (23°C)	g/cm <sup>3</sup>	1.04	1.03	1.04	1.03	1.64
Hardness	(shore A)	25	19	25	23	63
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	1.3 {13}	0.7 {7}	1.3 {13}	1.2 {12}	3.9 {40}
Elongation	%	140	150	140	150	100
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	0.3 {3}	0.2 {2}	0.5 {5}	0.3 {3}	1.3 {13}
Linear Expansion	1/K	-	-	-	-	-
Thermal Conductivity	W/(mK) {cal/(cm <sup>2</sup> °C)}	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.83 {2.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	4.0x10 <sup>14</sup>
Dielectric Strength	kV/mm	20	18	23	20	20
Dielectric Constant	(60Hz)	2.9	2.9	2.9	2.9	4.0
Dissipation Factor	(60Hz)	0.005	0.005	0.005	0.005	0.04
Flame Retardant		-	-	-	-	UL94 V-1

# Product List

## Coating Silicones

Coating Silicones Cure Type	1 Part Addition Cure					
	Heat Cure					
Product Code	TSE3212	TSE3221S	TSE325	TSE3250	TSE3251	TSE3251-C
Feature	General Purpose	General Purpose	Low Viscosity	Low Viscosity	General Purpose	General Purpose
Property	Semi-Flowable	Flowable	Flowable	Flowable	Semi-Flowable	Semi-Flowable
Appearance	White	Translucent	White	Transparent	White	Translucent
Viscosity (23°C) Pas {P}	280 {2800}	58 {580}	4.0 {40}	1.3 {13}	8.5 {85}	7.0 {70}
Curing Condition	150/1	150/1	150/1	150/1	150/1	150/1
Density (23°C) g/cm³	1.26	1.03	1.02	0.97	1.02	1.02
Hardness (shore A)	52	28	12	12	16	16
Tensile Strength MPa {kgf/cm²}	3.7 {38}	2.8 {29}	0.7 {7}	-	0.7 {7}	0.7 {7}
Elongation %	240	370	200	-	200	200
Adhesive Strength MPa {kgf/cm²}	2.6 {26}	2.5 {25}	0.4 {4}	0.1 {1}	0.4 {4}	0.4 {4}
Linear Expansion 1/K	1.9×10 <sup>-4</sup>	2.1×10 <sup>-4</sup>	2.1×10 <sup>-4</sup>	2.5×10 <sup>-4</sup>		
Thermal Conductivity W/(mK) {cal/(cms°C)}	0.29 {6.9×10 <sup>-4</sup> }	0.18 {4.4×10 <sup>-4</sup> }	0.18 {4.3×10 <sup>-4</sup> }	0.17 {4.1×10 <sup>-4</sup> }	0.18 {4.3×10 <sup>-4</sup> }	0.18 {4.3×10 <sup>-4</sup> }
Volume Resistivity ohm cm	2.0×10 <sup>15</sup>	6.0×10 <sup>15</sup>	2.0×10 <sup>15</sup>	2.0×10 <sup>15</sup>	2.0×10 <sup>15</sup>	2.0×10 <sup>15</sup>
Dielectric Strength kV/mm	20	23	21	21	20	20
Dielectric Constant (60Hz)	3.2	2.8	2.9	2.8	2.8	2.8
Dissipation Factor (60Hz)	0.001	0.001	0.001	0.001	0.002	0.001

Coating Silicones	1 Part Addition Cure		2 Part Addition Cure		
	Heat Cure				
Cure Type					
Product Code	TSE3251H	TSE3251H-C	TSE3033	TSE3331	TSE3331K-EX
Feature	General Purpose	General Purpose	Self Bonding	Flame Retardant	Flame Retardant
Property	Semi-Flowable	Semi-Flowable	Flowable	Flowable	Flowable
Appearance	White	Translucent	Transparent	Gray	Black
Viscosity (23°C)	Pas {P}	13 {130}	13 {130}		
Pot Life	(25°C) hr		6	13 {130}⁸	13 {130}⁴
Curing Condition		150/1	150/0.5	120/1	120/1
Density (23°C)	g/cm³	1.03	1.01	1.51	1.43
Hardness	(shore A)	17	30	60	50
Tensile Strength	MPa (kgf/cm²)	1.0 {10}	1.0 {10}	2.9 {30}	3.0 {30}
Elongation	%	220	130	50	270
Adhesive Strength	MPa (kgf/cm²)	0.6 {6}	0.3 {3} (glass)	1.3 {13}	3.9 {40}
Linear Expansion	1/K	2.1×10 <sup>-4</sup>	2.3×10 <sup>-4</sup>	1.7×10 <sup>-4</sup>	
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.18 {4.3×10 <sup>-4</sup> }	0.18 {4.3×10 <sup>-4</sup> }	0.63 {1.5×10}	0.53 {1.3×10 <sup>-3</sup> }
Volume Resistivity	ohm cm	2.0×10 <sup>15</sup>	2.0×10 <sup>15</sup>	2.0×10 <sup>14</sup>	6.0×10 <sup>15</sup>
Dielectric Strength	kV/mm	20	21	26	22
Dielectric Constant	(60Hz)	2.8	2.8	3.4	3.1
Dissipation Factor	(60Hz)	0.001	0.001	0.017	0.015

## Potting Silicones

Potting Gels	1 Part Gels	2 Part Gels					
Cure Type	Addition Cure	Addition Cure					
Product Code	TSE3051	TSE3062	XE14-B7393	TSE3070	TSE3080	TSE3081	
Feature	Heat Cure	General Purpose	Low Volatility	High Elongation	Thermal Conductivity	High Thermal Conductivity	
Appearance	Transparent	Transparent	Transparent	Transparent	Black	Black	
Mixing Ratio (A:B)	-	100:100	100:100	100:100	100:100	100:100	
Viscosity (after mixing)	Pas(P)	0.7 {7}	1.0 {10}	6.5 {65}	0.8 {8}	7.0 {70}	20.0 {200}
Pot Life (23°C)	min	-	60	30	4	3	3
Curing Conitions	°C/Hr	0.97	70/0.5	23/24	70/0.5	1/100	1/100
Penetration	0.1 mm	125/2	55	100	65	-	-
Density (23°C)	g/cm³	85	0.97	0.97	0.98	1.5	2.5
Volume Expansion	1/K	1.0x10 <sup>-3</sup>	1.0x10 <sup>-3</sup>	1.0x10 <sup>-3</sup>	1.0x10 <sup>-3</sup>	-	-
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.17	0.17 {4.1x10 <sup>-4</sup> }	0.17	0.17 {4.1x10 <sup>-4</sup> }	0.63 {1.5x10 <sup>-3</sup> }	1.26 {3.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	1x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	18	18	18	18	22	22
Dielectric Constant	(60Hz)	2.8	2.7	2.7	2.7	3.3	5.0
Dissipation Factor	(60Hz)	0.001	0.001	-	0.002	0.04	0.003

Potting Rubber		1 Part Rubber						
Cure Type		Addition Cure		Alkoxy				
Product Code		TSE325	TSE3250	TSE399	TSE3991	TSE3995	TSE3996	XE11-A5133S
Feature		Low Viscosity	General Purpose	Fast Cure	Ultra Low viscosity	Fast cure Low Volatility	Fast cure Low Volatility	Flame Retardant Low Volatility
Property		Flowable	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable
Viscosity (23°C)	Pas (P)	4.0 {40}	1.3 {13}	2.5 {25}	1.5 {15}	2.5 {25}	1.7 {17}	60 {600}
Tack Free Time	min	150/1	150/1	10	10	10	10	10
Density (23°C)	g/cm³	1.02	0.97	1.04	1.03	1.04	1.03	1.64
Hardness	(shore A)	12	9	25	19	25	23	63
Tensile Strength	MPa {kgf/cm²}	0.7 {7}	-	1.3 {13}	0.7 {7}	1.3 {13}	1.2 {12}	3.9 {40}
Elongation	%	200	-	140	150	140	150	100
Adhesive Strength	MPa {kgf/cm²}	0.4 {4}	0.1 {1}	0.3 {3}	0.2 {2}	0.5 {5}	0.3 {3}	1.3 {13}
Linear Expansion	1/K	2.1x10 <sup>-4</sup>	2.5x10 <sup>-4</sup>	-	-	-	-	-
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.18 {4.3x10 <sup>-4</sup> }	0.17 {4.1x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.18 {4.4x10 <sup>-4</sup> }	0.83 {2.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	4.0x10 <sup>14</sup>
Dielectric Strength	kV/mm	21	21	20	18	23	23	20
Dielectric Constant	(60Hz)	2.9	2.8	2.9	2.9	2.9	2.9	4.0
Dissipation Factor	(60Hz)	0.001	0.001	0.005	0.005	0.005	0.005	0.04
Remarks		-	-	-	-	-	-	UL94 V-1

# Product List

## Potting Silicones

Potting Rubber Cure Type	2 Part Rubber				
	Addition Cure				
Product Code	RTV6428	RTV615	RTV655	RTV6166	RTV6196
Feature	Flame Retardant	General Purpose	Low Temperature Resistant	General Purpose Gel	General Purpose Gel
Property	Flowable	Flowable	Flowable	Flowable	Flowable
Appearance	Dark Grey	Clear	Clear	Clear	Clear
Mixing Ratio ((A):(B))	1:1	10:1	10:1	1:1	1:1
Viscosity (after mixing)	Pas{P}	1.3 {13}	4 {40}	5.2 {52}	0.75 {7.5}
Pot Life	min.	4	240	240	120
Curing Conditions	°C/Hr	100/1	100/1	100/1	150/0.5
Density (25°C)	g/cm³	-	1.02	1.04	0.98
Hardness	(shore A)	62	44	45	-
Tensile Strength	MPa {kgf/cm²}	3.3 {34}	6.5 {66}	6.5 {66}	-
Elongation	%	60	120	120	-
Adhesive Strength	MPa {kgf/cm²}	-	-	-	-
Linear Expansion	1/K	21.6×10 <sup>-5</sup>	27.0×10 <sup>-5</sup>	33×10 <sup>-5</sup>	27×10 <sup>-5</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.31	0.2	0.2	0.19
Volume Resistivity	ohm cm	5.7×10 <sup>14</sup>	1.8×10 <sup>15</sup>	1.2×10 <sup>15</sup>	1.0×10 <sup>15</sup>
Dielectric Strength	kV/mm	20.9	19.7	19.7	20
Dielectric Constant	(1kHz)	3.09	2.7	2.7	2.8
Dissipation Factor	(1kHz)	0.0061	0.0006	0.0004	0.001

Potting Rubber Cure Type	2 Part Rubber			
	Condensation Cure			
Product Code	RTV60	RTV88	RTV560	RTV567
Feature	High Temperature	High Temperature	Low Temperature Resistant	Low Outgassing
Property	Flowable	Spreadable paste	Flowable	Flowable
Appearance	Red	Red	Red	Translucent
Mixing Ratio ((A):(B))	-	-	100:0.5	100:0.1
Viscosity (after mixing)	Pas{P}	47 {470}	880 {8800}	30 {300}
Tack Free Time	min.	-	-	1260
Pot Life	(25°C) hr	2	0.75	2.25
Curing Conditions	°C/Hr	RT/24	RT/24	25/24
Density (25°C)	g/cm³	1.48	1.47	1.42
Hardness	(shore A)	57	58	55
Tensile Strength	MPa {kgf/cm²}	7.0 {71}	6.0 {60}	4.8 {49}
Elongation	%	120	120	120
Linear Expansion	1/K	20×10 <sup>-5</sup>	20×10 <sup>-5</sup>	20×10 <sup>-5</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.31	0.31	0.31
Volume Resistivity	ohm cm	4.4×10 <sup>14</sup>	2.8×10 <sup>14</sup>	2.0×10 <sup>14</sup>
Dielectric Strength	kV/mm	17.7	17.4	21.2
Dielectric Constant	(1kHz)	4.0	4.3	3.9
Dissipation Factor	(1kHz)	0.02	0.03	0.02



Potting Silicones

Potting Rubber	2 Part Rubber							
Cure Type	Addition Cure						Condensation Cure	
Product Code	TSE3032	TSE3033	TSE3331	TSE3331K-EX	TSE3431-H	XE14-B7892	TSE3663	TSE3664
Feature	General Purpose	Self Bonding	Flame Retardant	Flame Retardant	Flame Retardant	Flame Retardant	Self Bonding	Flame Retardant
Property	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable UL94 V-0
Appearance	Transparent	Transparent	Gray	Black	Black	Black	Off-White	Grey
Mixing Ratio ((A):(B))	100:10	100:100	100:100	100:100	100:10	100:100	100:2	100:7.5
Viscosity (after mixing) Pas{p}	4.0 {40}	1.0 {10}	3.5 {35}	3.0 {30}	4.0 {40}	1.3 {13}	4.0 {40}	3.0 {30}
Pot Life (23°C) hr	4	6	8	4	1.5	2	0.5	0.1
Curing Conditions °C/Hr	100/1	150/0.5	120/1	120/1	100/1	60/1	23/72	23/72
Density (23°C) g/cm³	1.02	1.01	1.51	1.43	1.52	1.39	1.19	1.41
Hardness (shore A)	35	30	60	50	74	60	35	65
Tensile Strength MPa {kgf/cm²}	4.5 {46}	1.0 {10}	2.9 {30}	3.0 {30}	4.1 {42}	3.5 {36}	1.4 {14}	4.0{40}
Elongation %	210	130	50	270	60	100	130	-
Adhesive Strength MPa {kgf/cm²}	-	0.3 {3} (glass)	1.3 {13}	3.9 {40}	-	-	0.9 {9}	-
Linear Expansion 1/K	2.3x10 <sup>-4</sup>	2.3x10 <sup>-4</sup>	1.7x10 <sup>-4</sup>		1.7x10 <sup>-4</sup>	1.9x10 <sup>-4</sup>	1.9x10 <sup>-4</sup>	-
Thermal Conductivity W/(mK) {cal/(cms°C)}	0.17{4.1x10 <sup>-4</sup> }	0.17 {4.1x10 <sup>-4</sup> }	0.63 {1.5x10}	0.53 {1.3x10 <sup>-3</sup> }	0.63 {1.5x10 <sup>-3</sup> }	0.44 {1.1x10 <sup>-3</sup> }	0.29 {6.4x10 <sup>-4</sup> }	0.42 }1.0x10 <sup>-3</sup> }
Volume Resistivity ohm cm	2.0x10 <sup>15</sup>	2.0x10 <sup>15</sup>	2.0x10 <sup>14</sup>	6.0x10 <sup>15</sup>	5.0x10 <sup>14</sup>	2.5x10 <sup>15</sup>	1.0x10 <sup>15</sup>	5x10 <sup>15</sup>
Dielectric Strength kV/mm	21	21	26	22	27	27	20	26
Dielectric Constant (60Hz)	2.8	2.8	3.4	3.1	3.5	3.1	3.1	3.1
Dissipation Factor (60Hz)	0.001	0.001	0.017	0.015	0.01	0.01	0.025	0.01
Remarks	Non-Adhesive	Adhesive	UL94 V-0 Adhesive	Adhesive	UL94 V-0 Non-Adhesive	UL94 V-0 Non-Adhesive	-	-

Potting Rubber	2 Part Rubber							
Cure Type	Condensation Cure							
Product Code	TSE350	RTV11	RTV511	RTV566	RTV577	RTV8111	RTV8112	RTV8262
Feature	General Purpose	General Purpose	Low Temperature Resistant	Low Outgassing	Low Temperature Resistant	MIL-S-23586 E	MIL-S-23586 E	MIL-S-23586 E
Property	Flowable	Flowable	Flowable	Flowable	Paste	Flowable	Flowable	Flowable
Appearance	Stone White	White	White	Red	white	white	white	red
Mixing Ratio ((A):(B))	100:0.5	100:0.5	100:0.5	100:0.1	100:0.5	100:2	100:5	100:5
Viscosity (after mixing) Pas{p}	12 {120}	11 {110}	16 {160}	42.7 {427}	700 {7000}	9.9 {99}	11 {110}	47 {470}
Pot Life (25°C) hr	1*	1.5	1.5	1.5	2	0.5	2	2
Curing Conditions °C/Hr	23/72	25/24	25/24	RT/24	25/24	25/24	25/24	25/24
Density (25°C) g/cm³	1.18*	1.19	1.21	1.49	1.35	1.18	1.19	1.47
Hardness (shore A)	47	41	42	61	48	45	42	52
Tensile Strength MPa {kgf/cm²}	2.5 {25}	3.6 {36}	2.7 {28}	5.6 {57}	3.1 {32}	2.5 {25}	2.1 {21}	4.1{42}
Elongation %	170	190	170	120	150	160	160	150
Adhesive Strength MPa {kgf/cm²}	-	-	-	-	-	-	-	-
Linear Expansion 1/K	-	25x10 <sup>-5</sup>	22x10 <sup>-5</sup>	20x10 <sup>-5</sup>	20x10 <sup>-5</sup>	25x10 <sup>-5</sup>	25x10 <sup>-5</sup>	20x10 <sup>-5</sup>
Thermal Conductivity W/(mK) {cal/(cms°C)}	-	0.29	0.26	0.31	0.31	0.29	0.29	0.31
Volume Resistivity ohm cm	1.0x10 <sup>14</sup>	1.0x10 <sup>15</sup>	2.0x10 <sup>14</sup>	2.0x10 <sup>14</sup>	5.6x10 <sup>14</sup>	1.0x10 <sup>15</sup>	2.7x10 <sup>15</sup>	4.4x10 <sup>14</sup>
Dielectric Strength kV/mm	22	20.3	20.5	21.2	18.5	19.7	18.7	18.5
Dielectric Constant (60Hz)	3.1	3.3	3.6	3.9	3.9	3.3	4.02	3.98
Dissipation Factor (60Hz)	0.025	0.006	0.005	0.02	0.02	0.0055	0.007	0.017
Frenquency Tested	-	1kHz	1kHz	1kHz	1kHz	1kHz	1kHz	1kHz

\*Tested at 23°C

Silicone Junction Coatings

Silicone Junction Coatings		1 Part Materials				
Cure Type		Addition Cure				
Product Code		TSJ3155	TSJ3156	TSJ3185	TSJ3186	TSJ3187
Feature		Thixotropic	Thixotropic	Gel	Gel	Junction Coating
Property		Semi-Flowable	Semi-Flowable	Semi-Flowable	Semi-Flowable	Gel Semi-Flowable
Appearance		White	Translucent	Translucent	Translucent	Translucent
Viscosity (23°C)	Pas {P}	6 {60}	6 {60}	3 {30}	4 {40}	10 {100}
Curing Conditions	°C/Hr	150/4	150/4	150/4	150/6	150/4
Density (23°C)	g/cm³	1.02	1.01	1.01	1.05	1.00
Hardness	(shore A)	10	20	-	-	40
Cubic Expansion	1/K	2.3x10		1.1x10 <sup>-3</sup>	1.1x10 <sup>-3</sup>	1.1x10 <sup>-3</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.18 {4.3x10 <sup>-4</sup> }	0.18 {4.3x10 <sup>-4</sup> }	0.18	0.18	0.18
Volume Resistivity	ohm cm	1.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>	1.05x10 <sup>15</sup>	1.5x10 <sup>15</sup>	1.5x10 <sup>15</sup>
Dielectric Strength	kV/mm	20	20	15	15	21
Dielectric Constant	(60Hz)	2.8	2.7	2.7	2.8	2.7
Dissipation Factor	(60Hz)	0.001	0.001	0.001	0.0004	0.0006
Na <sup>+</sup> K <sup>+</sup>		Less than 2	Less than 2	-	-	-

Silicone Junction Coatings		2 Part Materials	
Cure Type		Addition Cure	
Product Code		TSJ3175	XE14-B5778
Feature		Gel	Semi-Flowable
Appearance		Black	Transparent
Mixing Ratio (A B )		100:100	100:100
Viscosity (after mixing)	Pas{P}	10 {100}	14 {140}
Pot Life (23°C)	Hr	12	8
Curing Conditions	°C/Hr	125/2	80/2
Density (23°C)	g/cm³	1.00	1.02
Hardness	(shore A)	-	16
Penetration	1/10mm	70	-
Linear Expansion	1/K	1.0x10 <sup>-5</sup> *	2.3x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.18 {4.3x10 <sup>-4</sup> }	0.18 {4.3x10 <sup>-4</sup> }
Volume Resistivity	ohm cm	1.0x10 <sup>15</sup>	2.0x10 <sup>5</sup>
Dielectric Strength	kV/mm	15	24
Dielectric Constant	(60Hz)	2.8	2.7
Dissipation Factor	(60Hz)	0.0004	0.001
Na <sup>+</sup> K <sup>+</sup>		Less than 2	Less than 2

\*cubic expansion

## Heat Conductive Silicones

Heat Conductive Silicones		1 Part Condensation Cure				
Cure Type		Alkoxy				
Product Code		TSE3941	TSE3941M	TSE3946	XE11-A5133S	XE11-B5320
Feature		Flame Retardant	General Purpose	Flame Retardant Low Volatility	Flame Retardant Low Volatility	Flame Retardant Low Volatility
Property		Non-Flowable	Flowable	Non-Flowable	Flowable	Non-Flowable
Viscosity (23°C)	Pas {P}	-	50 {500}	-	60 {600}	-
Tack Free Time	min	5	5	5	10	5
Density (23°C)	g/cm <sup>3</sup>	1.65	1.64	1.70	1.64	2.59
Hardness	(shore A)	60	63	68	63	83
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	2.9 {30}	3.2 {33}	3.9 {40}	3.9 {40}	4.1 {41}
Elongation	%	100	70	100	100	50
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	1.4 {14}	1.4 {14}	1.6 {16}	1.3 {13}	1.4 {14}
Linear Expansion	1/K	1.6x10 <sup>-4</sup>	-	-	-	1.9x10 <sup>-4</sup>
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.83 {2.0x10 <sup>-3</sup> }	0.83 {2.0x10 <sup>-3</sup> }	0.83 {2.0x10 <sup>-3</sup> }	0.83 {2.0x10 <sup>-3</sup> }	1.24 {3.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	4.0x10 <sup>14</sup>	4.0x10 <sup>14</sup>	4.0x10 <sup>14</sup>	4.0x10 <sup>14</sup>	2.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	22	21	23	20	17
Dielectric Constant	(60Hz)	4.0	4.0	4.0	4.0	2.6
Dissipation Factor	(60Hz)	0.04	0.04	0.04	0.04	0.005
Remarks		UL94 V-1	-	UL94 V-1	UL94 V-1	-

Heat Conductive Silicones		1 Part Addition Cure			2 Part Addition Cure				
Cure Type		Heat			Heat				
Product Code		TSE3280-G	TSE3281-G	TSE3282-G	TSE3331	TSE3331K-EX	TSE3380	TSE3080	TSE3081
Feature		Thermal Conductivity	High Thermal Conductivity	High Thermal Conductivity	Flame Retardant	Flame Retardant	High Thermal Conductivity	High Thermal Conductivity	High Thermal Conductivity
Property		Flowable	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable	Flowable
Appearance		Gray	Gray	Gray	Gray	Black	Gray	Black	Black
Mixing Ratio (A):(B)		-	-	-	100:100	100:100	100:100	100:100	100:100
Viscosity (after mixing)	Pas{p}	60 {600}	60 {600}	20 {200}	3.5 {35}	3.0 {30}	40 {400}	7.0 {70}	20.0 {200}
Pot Life	Hr	-	-	-	8	4	8	3	3
Curing Conditions	°C/Hr	150/1	150/1	150/1	120/1	120/1	150/0.5	1/100	1/100
Density (23°C)	g/cm <sup>3</sup>	2.10	2.70	2.70	1.51	1.43	2.70	1.5	2.5
Hardness	(shore A)	62	84	80	60	50	70	25*	10*
Tensile Strength	MPa {kgf/cm <sup>2</sup> }	3.2 {33}	4.5 {46}	4.0 {41}	2.9 {30}	3.0 {30}	2.5 {25}	-	-
Elongation	%	110	50	50	70	270	100	-	-
Adhesive Strength	MPa {kgf/cm <sup>2</sup> }	2.0 {20}	2.5 {25}	2.5 {25}	1.3 {13}	3.9 {40}	1.5 {15}	-	-
Linear Expansion	1/K	2.2x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	1.4x10 <sup>-4</sup>	1.7x10 <sup>-4</sup>	-	1.4x10 <sup>-4</sup>	-	-
Thermal Conductivity	W/(mK) {cal/(cms°C)}	0.89 {2.1x10 <sup>-3</sup> }	1.68 {4.0x10 <sup>-3</sup> }	2.0 {4.8x10 <sup>-3</sup> }	0.63 {1.5x10 <sup>-3</sup> }	0.53 {1.3x10 <sup>-3</sup> }	1.68 {4.0x10 <sup>-3</sup> }	0.63 {1.5x10 <sup>-3</sup> }	1.26 {3.0x10 <sup>-3</sup> }
Volume Resistivity	ohm cm	2.5x10 <sup>14</sup>	4.8x10 <sup>14</sup>	4.8x10 <sup>14</sup>	2.0x10 <sup>14</sup>	6.0x10 <sup>15</sup>	2.1x10 <sup>14</sup>	1.0x10 <sup>15</sup>	1.0x10 <sup>15</sup>
Dielectric Strength	kV/mm	21	15	23	26	22	15	22	22
Dielectric Constant	(60Hz)	4.3	5.2	5.5	3.4	3.1	5.7	3.3	5.0
Dissipation Factor	(60Hz)	0.002	0.002	0.001	0.017	0.015	0.002	0.04	0.003
Frequency Tested		-	-	-	UL94 V-0	Adhesive	-		

\*penetration

Product List

Heat Conductive Silicone Grease

Heat Conductive Silicones		Silicone Grease				
Cure Type						
Product Code		YG6111	YG6240	YG6260	YG6260V	TSK5303
Feature		Low Volatility	Low Bleed Low Volatility	Good Paintability	High Thermal Conductivity Low Volatility	Heat Resistant Low Volatility
Appearance		White	White	White	White	White
Density (23°C) g/cm <sup>3</sup>		2.45	2.46	2.50	2.62	2.46
Thermal Conductivity W/(m K) (cal/(cms° C))		0.84 {2.0x10 <sup>-3</sup> }	0.84 {2.0x10 <sup>-3</sup> }	0.84 {2.0x10 <sup>-3</sup> }	1.00 {2.4x10 <sup>-3</sup> }	0.84 {2.0x10 <sup>-3</sup> }
Volume Resistivity ohr cm		2.0x10 <sup>14</sup>	2.0x10 <sup>6</sup>	2.0x10 <sup>14</sup>	3.0x10 <sup>6</sup>	1.5x10 <sup>14</sup>
Dielectric Constant (60Hz)		5.4	5.0	5.0	5.0	5.0
Dissipation Factor (60Hz)		0.005	0.006	0.005	0.006	0.005
Penetration (JISK2220)		310	290	300	340	330
Bleed %(150 °C, 24h)		0.5	0.0	0.2	0.1	2.1 <sup>1)</sup>
Evaporation %(150 °C, 24h)		0.4	0.4	0.2	0.1	0.4 <sup>1)</sup>
Typical property data values should not be used as specifications.						1) 200°C, 24Hr.

Low Volatility Grades

Low Molecular Weight Siloxane Content

Type	Product Code	Low Molecular Siloxane (D <sub>3</sub> -D <sub>10</sub> ) wt%
1 Part Condensation Cure	TSE3925	0.028
	TSE3944	0.028
	TSE3945	0.025
	TSE3946	0.025
	TSE3975	0.028
	TSE3976-B	0.025
	TSE3995	0.028
	TSE3996	0.028
	XE11-A5133S	0.025
	XE11-B5320	0.020
Grease	YG6111	0.010
	YG6240	0.003
	YG6260	0.003
	YG6260V	0.010
	TSK5303	0.0015

Low molecular weight siloxane refers to cyclic dimethyl polysiloxane that due to its volatility, sublimates during and after cure. Low molecular weight siloxane is known to cause electrical point interference. Low volatility grades are developed to limit the levels of low molecular weight siloxane.

Test Method:	Gas Chromatography
Equipment:	Capillary Gas Chromagraph Hewlett-Packard HP 6890
Column Temperature:	40°C - 310°C
Injection Temperature:	260°C
Injection Amount:	1 micron 1
Extraction Menstruum:	n-hexane

## UL Status

The following products are recognized by Underwriters Laboratories Inc.

File No. E56745 and File No. E36952

Type	Product Code	Color	Minimum Thickness mm	Temperature °C		HWI (PLC)	UL94 Flame Class	HAI (PLC)	HVTR (PLC)	D495 (PLC)	CTI (PLC)
				Elec.	Mech.						
ONE PART	IS802	White	1.2 only	105	105	4	HB	0	0	5	0
	IS803	Black	1.2 only	105	105	4	HB	0	0	5	0
	IS806	Red	1.9 only	105	105	-	HB	-	-	-	-
	IS808	Translucent	1.2 only	105	105	4	HB	0	0	5	0
	RTV160	White	0.75	105	105	4	HB	0	-	-	-
	RTV160	White	1.5	105	105	3	HB	0	-	-	-
	RTV160	White	2.5	105	105	3	HB	0	1	1	0
	RTV160	White	3.0	105	105	-	HB	-	-	-	-
	RTV162	White	0.91	105	105	-	HB	0	-	-	-
	RTV162	White	1.5	105	105	3	HB	0	-	-	-
	RTV162	White	3.0	105	105	2	HB	0	0	5	0
	RTV5242	White	1.5	105	105	3	HB	0	-	-	-
	RTV5242	White	3.0	105	105	3	HB	0	0	5	0
	RTV5243	Black	1.5	105	105	3	HB	0	-	-	-
	RTV5243	Black	3.0	105	105	3	HB	0	0	5	0
	RTV5249	Gray	1.5	105	105	3	HB	0	-	-	-
	RTV5249	Gray	3.0	105	105	3	HB	0	0	5	0
	TSE3854D-G	Gray	0.75	105	105	0	94V-0	0	-	-	-
	TSE3854D-G	Gray	1.50	105	105	0	94V-0	0	-	-	-
	TSE3854D-G	Gray	3.0	105	105	0	94V-0	0	0	3	0
	TSE3854D-W	White	1.5	105	105	0	94V-0	3	-	-	-
	TSE3854D-W	White	3.0	105	105	0	94V-0	-	-	-	-
	XE11-A5133S	White	3.0	105	105	-	94V-1	-	-	-	-
	TSE3941	White	0.75	-	-	-	94V-1	-	-	-	-
	TSE3941	White	1.5	105	105	2	94V-1	0	-	-	-
	TSE3941	White	3.0	105	105	1	94V-0	0	0	3	0
	TSE3944-G	Gray	0.75	105	105	-	94V-0	-	-	-	-
	TSE3944-G	Gray	1.5	105	105	0	94V-0	0	-	-	-
	TSE3944-G	Gray	3.0	105	105	0	94V-0	0	0	3	0
	TSE3944-W	White	0.75	105	105	-	94V-1	-	-	-	-
	TSE3944-W	White	1.5	105	105	0	94V-0	0	-	-	-
	TSE3944-W	White	3.0	105	105	0	94V-0	0	0	3	0
	TSE3945	Gray	3.3	105	105	2	94V-0	0	0	1	0
	TSE3946	White	3.0	105	105	1	94V-1	0	0	0	0
	TSE3976-B	Black	0.64	-	-	-	94HB	-	-	-	-
	TSE3976-B	Black	1.5	-	-	-	94HB	-	-	-	-
	TSE3976-B	Black	3.0	-	-	-	94HB	-	-	-	-
TWO PART	D1-SEA210	Gray	2.5 only	105	105	3	HB	0	0	5	0
	TSE3331	Black	1.0	105	105	-	94V-0	-	0	0	0
	TSE3331	Black	1.6	105	105	2	94V-0	0	-	-	-
	TSE3331	Black	2.0	105	105	-	94V-0	-	-	-	-
	TSE3331	Black	3.0	105	105	0	94V-0	0	-	-	-
	TSE3331K*EX	Black	2.5	105	105	-	94V-0	-	-	-	-
	TSE3331K*EX	Black	3.0	105	105	-	94V-0	-	-	-	-
	TSE3431-H	Gray	1.0	105	105	0	94V-0	0	0	1	1
	TSE3431-H	Gray	1.5	105	105	-	94V-0	-	-	-	-
	TSE3431-H	Gray	2.5	105	105	0	94V-0	0	-	-	-
	TSE3431-H	Gray	3.0	105	105	-	94V-0	-	-	-	-
	XE14-B7892	Black	2.0	105	105	-	94V-1	-	-	-	-
	XE14-B7892	Black	3.0	105	105	-	94V-0	-	-	-	-
	TSE3664	Grey	1.0	105	105	-	94V-1	-	-	-	-
	TSE3664	Grey	2.0	105	105	-	94V-0	-	-	-	-
	TSE3664	Grey	3.0	105	105	-	94V-0	-	-	-	-

Product List

1 Part Condensation Cure

Product	Package Color	Color	100g Tube		333ml Cartridge		1kg Can		Can		Pail		Drum	Bttl
			W	C	W	C	W	C	W	C	W	C		C
General Purpose														
	RTV142	White			06S									
	RTV160	White			12C						5GP			
	RTV162	White			12C						5GP		55G	
	RTV5242	White			12C						5GP		55F	
	RTV5243	Black			12C						5GP		55F	
	RTV5249	Gray			12C						5GP		55F	
	ISO802	White	3TG		12C						5GP		55G	
	ISO803	Black			12C						5GP		55G	
	ISO808	Translucent			12B						5GP		55G	
	ISO806	Red	3TG		12C						5GP		55G	
	RTV102	White	12T		12C						5GP		55G	
	RTV103	Black	85G		12C						5GP		55G	
	RTV108	Translucent			06S						55G		5GP	
	RTV109	Aluminum			12B/12C									
	RTV112	White	85G		12T						5GP			
	RTV118	Translucent	85G		12T						5GP		55G	
	RTV1473	Black	3TG		12C						5GP		55G	
	TRV157	Grey	3TG		06S								55G	
	RTV159	Red	3TG		06S/177G									
	FRV1106	Red			06S									
Flame Retardant	TSE392		○	○		○	○					○	○	
	TSE3925		○	○		○	○						○	
	TSE397		○	○		○	○		○	(4kg)		○	○	
	TSE3971		○			○								
	TSE3972			○			○							
	TSE3975		○	○		○	○							
	TSE399		○	○		○	○		○	○	(4kg)		○	○
	TSE3991		○	○			○			○			○	
	TSE3995		○	○		○	○						○	
	TSE3996		○	○		○	○					○		
Heat Resistant	TSE3854D		(130g) (230g)			○						○		
	TSE3941		(150g)			○						○		
	TSE3944		(130g)			○								
	TSE3945													
	TSE3946		(150g)			○								
Thermally Conductive	XE11-A5133S		(150g)			○								
	TSE3877-B													
	TSE3976-B													
	TSE3876													
	TSE3941		(150g)			○						○		
	TSE3941M		(150g)			○						○		
	TSE3946		(150g)			○								

Color Key: W: White / C: Clear  
\* TSE3876: Dark Brown

Packaging: 100g Tube (20 per box)  
1kg Can (10 cans per box)  
100g Bottle (20 per box)

333ml Cartridge (10 x 5 boxes per case)  
Can (4 cans per box)  
500g Bottle (10 per box)

Silicone Grease

Product	Package Color	Tube		Can	Pail
		W		W	W
Grease	YG6111	(200g)		(1kg)	(20kg)
	YG6240	(200g)		(1kg)	(20kg)
	YG6260	(200g)		(1kg)	(20kg)
	YG6260V			(2kg)	
	TSK5303			(1kg) (8kg)	

Color Key: W: White  
Packaging: 200g Tube (20 per box)  
1kg, 2kg Can (10 cans per box)

Legend	
5GP	Pail (40.0LBS-18.16KG)
55F	Drum (540.0LBS-245.16KG)
1GP	Pail (10.0LBS-4.54KG)
5GP	Pail (50.0LBS-22.7KG)
55G	Drum (450.0LBS-204.30KG)
001	Kit (1.0LBS-0.457KG)
002	Kit (2.0LBS-0.908KG)
010	Pail Kit (10.0LBS-4.54KG)
012	Pail Kit (12.1LBS-5.477KG)
018	Pail Kit (18.0LBS-8.17KG)
040	Pail (40.0LBS-18.16KG)
044	Pail Kit (44.0LBS-19.97KG)
080	Pail Kit (80.0LBS-36.32KG)
440	Kit (440.0LBS-199.76KG)
495	Kit (495.0LBS-224.73KG)
06S	Cartridge (0.390LBS-0.177KG)

## 1 Part Addition Cure

Product	Package Color	Color	100g Tube		333ml Cartridge		1kg Can		Pail		Drum	Bttl
			W	C	W	C	W	C	W	C		C
RTV6424		White	-		06S							
TSE3051								○		(20kg)		
TSE3051-G												
TSE3212			○		○							
TSE322												
TSE322S												
TSE3221S				○		○		○		○	○	
TSE325					○		○		(18kg)			
TSE3250								○				
TSE3251							○					
TSE3251-C				○				○				
TSE3251H			(140g)		(310ml)	○			○			
TSE3251H-C							○					
TSE326						○			○			
TSE326MEX		Red										
TSE3260		Red										
TSE3261-G								(1.5KG)		(25KG)		
TSE3280-G		Gray										
TSE3281-G		Gray										
TSE3282-G												
TSJ3155												

Color Key: W: White / C: Clear  
 \* TSE3876: Dark Brown

Packaging: 100g Tube (20 per box)  
 1kg Can (10 cans per box)  
 100g Bottle (20 per box)

333ml Cartridge (10 x 5 boxes per case)  
 Can (4 cans per box)  
 500g Bottle (10 per box)

### Legend

5GP	Pail (40.0LBS-18.16KG)
55F	Drum (540.0LBS-245.16KG)
1GP	Pail (10.0LBS-4.54KG)
5GP	Pail (50.0LBS-22.7KG)
55G	Drum (450.0LBS-204.30KG)
001	Kit (1.0LBS-0.457KG)
002	Kit (2.0LBS-0.908KG)
010	Pail Kit (10.0LBS-4.54KG)
012	Pail Kit (12.1LBS-5.477KG)
018	Pail Kit (18.0LBS-8.17KG)
040	Pail (40.0LBS-18.16KG)
044	Pail Kit (44.0LBS-19.97KG)
080	Pail Kit (80.0LBS-36.32KG)
440	Kit (440.0LBS-199.76KG)
495	Kit (495.0LBS-224.73KG)
06S	Cartridge (0.390LBS-0.177KG)

# Product List / Technical information

## 2 Part Condensation and Addition Cure

Type		Product	Color	1kg Can	Can	Pail	Drum	Bottle
Condensation Cure	General Purpose	D1-SEA210	Dark Grey			1GP/5GP/10	55F	
		RTV88	Red		001	012/050		
		RTV60	Red		001	012/050		
		RTV8262	Red			012		
		RTV8111	White		001	012		
		RTV8112	White			012		
		RTV577	White			012		
		RTV567	Red		001			
		RTV566	Translucent		001			
		RTV560	Red			012		
		RTV511	White		001	012		
Addition Cure	Flame Retardant	TSE3331		(A/B: 1kg, 1.5kg ea)	(A/B: 6kg ea)	(A/B: 25kg ea)		
		TSE3431-H		(A: 1kg / B: 2.0, 2.5kg)		(A: 20kg, 25kg)		(B: 100g)
	Heat Resistant	XE14-B7892		(A/B: 1kg ea)				
	Thermally Conductive	TSE3331		(A/B: 1kg, 1.5kg ea)	(A/B: 6kg ea)	(A/B: 25kg ea)		
		TSE3380		(A/B: 1kg ea)				
	Junction Coating	TSJ3175						(A/B: 500g ea)
		XE14-B3445						(A/B: 500g ea)
		XE14-B5778						(A/B: 500g ea)
		TSE3062		(A/B: 1kg ea)	(A/B: 5kg ea)	(A/B: 18kg ea)		
		XE14-B7393		(A/B: 1kg ea)				
		TSE3070		(A/B: 1kg ea)				
		TSE3380		(A/B: 1kg ea)				
		TSE3431		(A: 1kg / B: 1.8kg)		(A: 18kg)		(B: 100g)
		TSE3663		(A: 1kg)		(A: 18kg)		(B: 30g, 500g)
		TSE3032		(A: 1kg)	(A: 15kg)			(B: 100g, 500g)
		TSE3033		(A/B: 1kg ea)		(A/B: 18kg ea)		
		RTV6428	Dark Grey		002	100		
		RTV615	Clear		01	010/044/5GP	440	
		RTV655	Clear		001	010		
		RTV6166	Clear		002	018/080		
		RTV6196	Clear		002	080		
		LVG342	White			040		

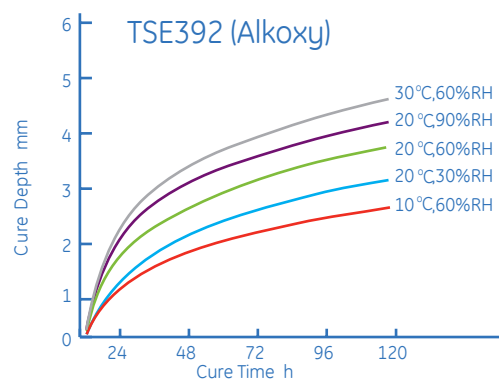
Packaging: 1kg, 1.5kg, 2kg Can (10 cans per box)  
 4kg, 5kg, 6kg Can (4 or 2 cans per box)  
 10g Bottle (100 per box)  
 30g, 100g Bottle (20 per box)  
 500g Bottle (10 per box)

Legend	
5GP	Pail (40.0LBS-18.16KG)
55F	Drum (540.0LBS-245.16KG)
1GP	Pail (10.0LBS-4.54KG)
5GP	Pail (50.0LBS-22.7KG)
55G	Drum (450.0LBS-204.30KG)
001	Kit (1.0LBS-0.457KG)
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018	Pail Kit (18.0LBS-8.17KG)
040	Pail (40.0LBS-18.16KG)
044	Pail Kit (44.0LBS-19.97KG)
080	Pail Kit (80.0LBS-36.32KG)
440	Kit (440.0LBS-199.76KG)
495	Kit (495.0LBS-224.73KG)
06S	Cartridge (0.390LBS-0.177KG)



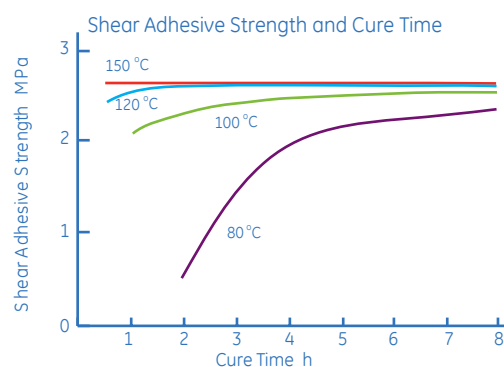
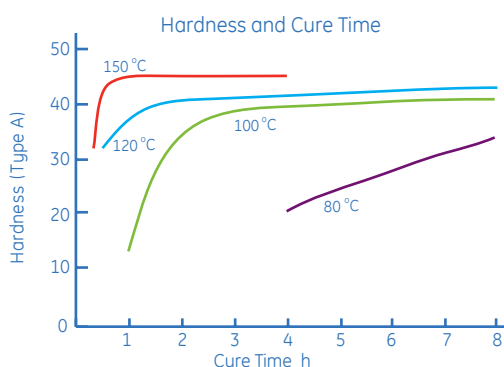
## Curing Properties: 1 Part Condensation Cure

One part condensation cure silicone adhesives and sealants cure when exposed to atmospheric moisture. The cure process begins from the outer surface, and therefore time is required for deep section cure. The cure time is affected by the reaction mechanism and viscosity. At 25 °C, 50%RH, it generally requires 10-60 minutes for the surface to become tack free, allowing the workpiece to proceed to the next process. Sufficient adhesion is achieved after 5-15 hours, allowing the workpiece to be moved. Elasticity is achieved after 1-3 days of cure time, and full material properties such as electronic performance is achieved after 7 days.



## Curing Properties: Addition Cure

Curing performance of addition cure silicone adhesives and sealants is demonstrated by changes in hardness and adhesion strength of TSE322 at temperatures between 80 and 150°C.

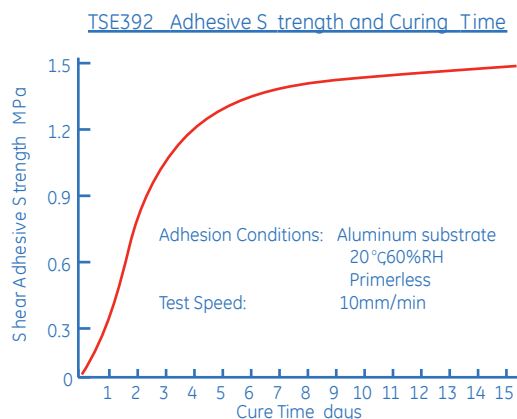


TSE322 shear adhesive strength in relation to temperature / humidity

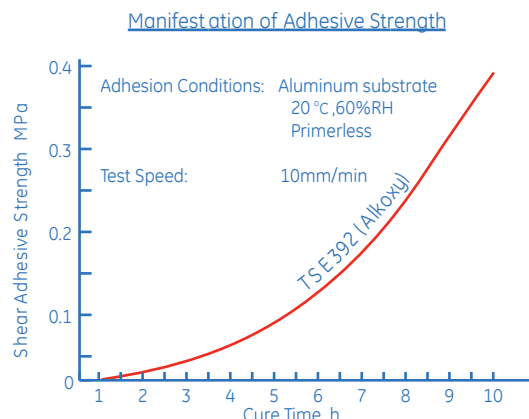
Test Conditions	Rate of Cohesive Failure %
Initial Measurement 150+°C, 1h	100
80°C, 90RH, 250h	100

## Curing Properties: 1 Part Condensation Cure

Adhesion strength gradually emerges after 2-10 hours. Full adhesion occurs at approximately 7 days.



TSE392 shear adhesive strength test using an aluminum substrate.



### Surface Preparation

All surfaces to be bonded should first be thoroughly cleaned. A cloth or industrial tissue saturated with naphtha or methyl ethyl ketone (MEK) may be used to remove dirt, oil or grease from non-plastic surfaces. Isopropanol is a commonly used solvent for preparation of plastic surfaces to avoid crazing of the substrate. When practical, surfaces should be wiped dry before applying the primer coating. Abrasion of the surface will also often improve adhesion.

When solvents are used as described, proper safety precautions must be observed.

### Priming Procedure

Primers may be applied by brushing, wiping or dipping. (Spraying may sometimes produce erratic results.) A thin uniform primer coating of approximately 0.01 to 0.02 mm (0.5mil) thickness usually provides the strongest bond. Care should be taken with plastic substrates such as polystyrene or polycarbonates (LEXAN®) which may tend to craze or become sticky when primer is applied. Crazing can be minimized if the primer is applied with a single, continuous stroke.

For most primers, a drying time of at least 30 minutes at room temperature is suggested prior to application of the RTV silicone rubber adhesive sealant. On porous surfaces, a second coat of primer may be required. Allow at least 30 minutes drying time between coats.

SS4179 primer must be allowed to air dry for at least 15 minutes at room temperature before applying the RTV silicone rubber adhesive sealant.

For all of these silicone primers sufficient humidity must be available for proper drying. A minimum of 25% relative humidity is suggested for all but SS4155 primer for which a minimum of 40% is suggested. Formation of a chalky white haze indicates adequate drying of the S4155 primer. Do not remove or contaminate such film prior to application of the RTV silicone rubber compound.

Primers may be left to dry for up to 24 hours before application of the sealant without loss of bonding effects. However, the primed surface must be covered to prevent dirt or contaminant pick-up.

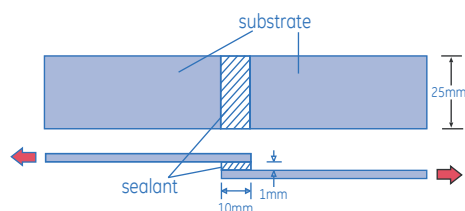
### Pros and Cons of Curing Mechanism

One part condensation cure RTVs are categorized into Alkoxy, Oxime and Acetoxy, based on by-products of the cure mechanism. The pros and cons of each need to be considered during material selection.

		Pros	Cons	Adhesion	Corrosion	Storage Stability	Cure Speed
Alkoxy	Fast Cure	No irritating odor No corrosion Fast cure	Solvent crack on polycarbonate	○	⊗	○	Fast
	Slow Cure	No irritating odor No corrosion	Slow Cure	○	⊗	○	Slow
Acetoxy		High strength Strong Adhesion Good transparency Fast cure	Acetic acid odor Corrosion of metals and stones	○	×	○	Fast

⊗ excellent ○ good × poor

### Shear Adhesion Test Method



Shear adhesive strength is measured at a pull rate of 10mm/min, using test pieces cured according to specific conditions and time.

### Primer Properties

	SS4004P	SS4044P	SS4120	SS4155	SS4179
Appearance	Pink	Light Yellow	Clear, Colorless	Blue	Clear, Colorless
Specific Gravity	0.85	0.85	0.82	0.82	0.98
Solid Content, %	15	15	3	10	6
Solvent(s)	Acetone Isopropanol Xylene N- butanol	Acetone Isopropanol Xylene N- butanol	Ethanol Methanol	Mineral Spirit	Ethyl Acetate toluene Methanol
Flash Point (Pensky-Martin Closed Cup)	-12°C (10°F)	-12°C (10°F)	-05.°C(31°F)	37°C (98°F)	-3°C (27°F)
Dry Time, Minutes	30	30	30	30	15
Flammability	Flammable	Flammable	Flammable	Flammable	Flammable
Recommended RTVs	1 & 2 Part Condensation	1 & 2 Part Condensation	1 & 2 Part Addition	All	1 Part Condensation

## Adhesion to Various Substrates: 1 Part Condensation Cure

Silicone Rubber TSE392 (Alkoxy)					
		Primer			
	Substrate	Primerless	ME121	ME123	XP80-A5363 YP9341
Metals	Copper	○	○		
	Steel	○	○		
	Mild Steel	○	○		
	Brass	○	○		
	Stainless Steel	○	○		
	Aluminum	○	○		
	Corrosion Resistant Aluminum	○	○		
	Galvanized Steel	○	○		
	Tin	○	○		
Plastic	Acrylic Resin	○		○	
	Phenol Resin	○		○	
	Epoxy Resin	○		○	
	Polycarbonate	○*2		○*2	
	Soft Polyvinyl Chloride	○		○	
	Rigid Polyvinyl Chloride	○		○	
	Polyester Film	○		○	
	Unsaturated Polyester	○		○	
	Polyamide	○		○	
	Nylon 66	○*1		○	○*1
	PBT	○		○	×
	PPS	○*1		○	○*1
	ABS Plastic	○		○	
	Polypropylene	×		×	○*3
	Polyethylene	×		×	△*3
	Fluorocarbon Resin	×		×	
	Silicone Resin Laminate	○		○	
	Silicone Resin Glass Cloth	○		○	
Rubber	Chloroprene Rubber	△		○	
	Nitrile Rubber	△		○	
	Styrene Butadiene Rubber	△		○	
	Ethylene Propylene Rubber	△		○	
	Silicone	○		○	
Inorganic	Glass	○	○		
	Mortar				
	ALC				
	Ceramic	○	○		
Wood	Cedar	○	○		
	Cypress	○	○		
	Lauan	△	△		

\*1: YP9341

\*2: Cracking may occur under some usage conditions.

\*3: XP80-A5363

○: Adheres completely

△: Adheres, but separates from the surface when pulled

×: Does not adhere

Adhesion: Addition Cure

Shear Adhesion of TSE322:  
Method:JIS K 6850  
Adhesive Surface Area:10 X 25mm  
Adhesive Thickness:1mm

Substrate	Shear Adhesive Strength MPa {kgf/cm²}	Rate of Cohesive Failure %
Aluminum (JIS H 4000)	2.5 {25}	100
Copper (JIS H 3100)	1.7 {17}	100
Brass	2.1 {21}	100
Stainless Steel	1.9 {19}	100
Nickel Plating	2.2 {22}	100
Solder Plate	2.0 {20}	100
PPS	2.1 {21}	100
PBT	1.5 {15}	100
Epoxy Resin	1.7 {17}	100
Polyester	1.6 {16}	100
Bakelite	2.5 {25}	100

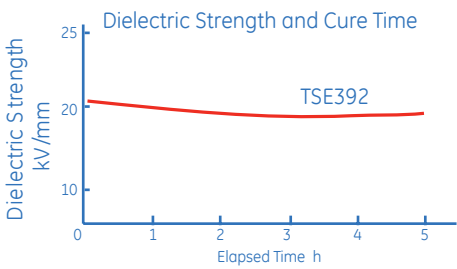
Oil Resistance: Addition Cure

TSE322 shear adhesive strength in relation to oil resistance

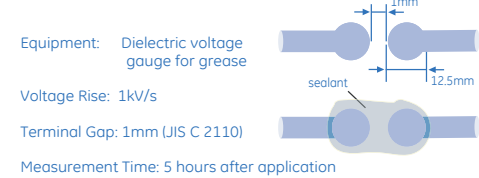
Test Conditions	Adhesive Strength MPa {kgf/cm²}	Failure %
Initial Measurement	2.0 {20}	100
Engine Oil (SAE20) 130°C, 200h	1.6 {16}	100

Substrate: Ceramic

Electrical Properties during Cure



Dielectric Strength Test Method

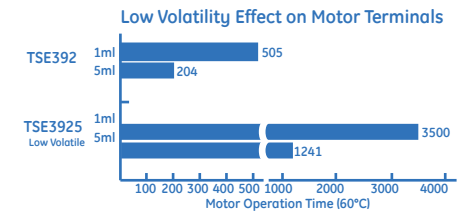


Chemical ResistanceElectrical Properties

	Chemical	Volume Change
Acid	Concentrated Hydrochloric Acid	⊙
	Hydrochloric Acid (3%)	⊙
	Concentrated Sulphuric Acid	Decomposition
	Sulphuric Acid (10%)	⊙
	Concentrated Nitric Acid	△
	Nitric Acid (7%)	⊙
	Glacial Acetic Acid	⊙
	Acetic Acid	⊙
	Hydrofluoric Acid	Decomposition
	Citric Acid	⊙
Alkali	Phosphoric Acid	⊙
	Concentrated Ammonia	⊙
	Ammonia (10%)	⊙
	Potassium Hydroxide (20%)	⊙
	Sodium Hydroxide (1%)	⊙
	Sodium Hydroxide (20%)	⊙
Inorganic Saline Solution	Sodium Hydroxide (50%)	⊙
	Sodium Chloride (10%)	⊙
	Sodium Carbonate (2%)	⊙
	Sodium Carbonate (20%)	⊙
	Hydrogen Peroxide (3%)	⊙
Oil	ASTM No.1 Oil (150°C, 70h)	⊙
	ASTM No.3 Oil (150°C, 70h)	△
	Mineral Oil	⊙
	Castor Oil	⊙
	Flax Seed Oil	⊙
	Silicone Oil (35°C, 70h)	△
Solvent	Acetone	△
	Butyl Alcohol	○
	Ethyl Alcohol	⊙
	Gasoline	×
	Mineral Spirit	×
Water	Toluene	×
	Water (room temperature)	⊙
	Boiling Water (70h)	⊙

⊙:<10%, ○: 10-25%, △: 25-75%, ×: >75%  
Test Method: Volume change of cured liquid silicone rubber after immersing 1week at 25°C

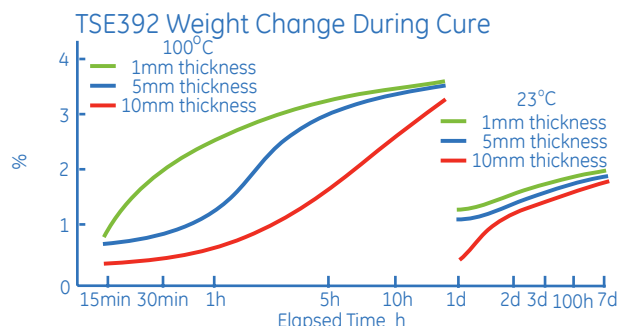
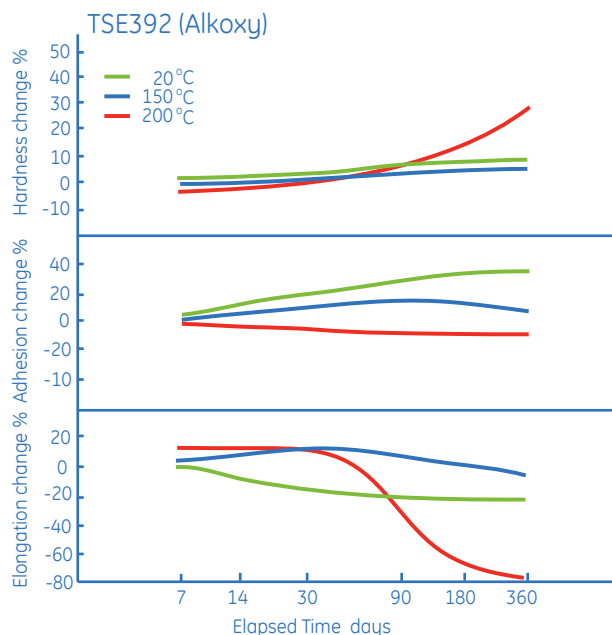
Point Interference



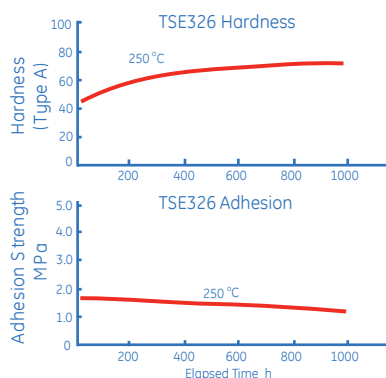
Test Method: 1ml and 5ml of sealant was applied to an airtight container turned with a micrometer. Time required to come to a complete stop was measured.

## Heat Resistance: 1 Part Condensation Cure

Change in Physical Properties with Heat Exposure



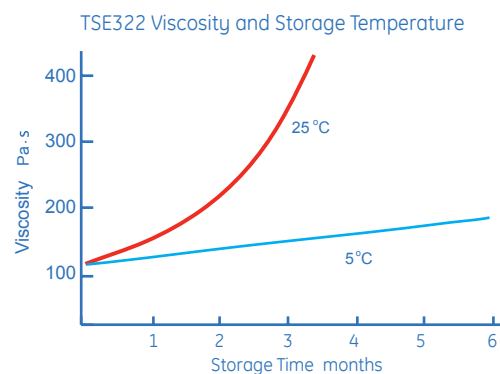
## Heat Resistance: Addition Cure



Test Method: Hardness and adhesive strength are measured using a test sample that has been returned to room temperature after being exposed to heat for a specified period of time.

## Storage Stability

Storing under low temperature conditions is extremely important, particularly for one-part addition cure RTVs. High temperature storage may increase viscosity.



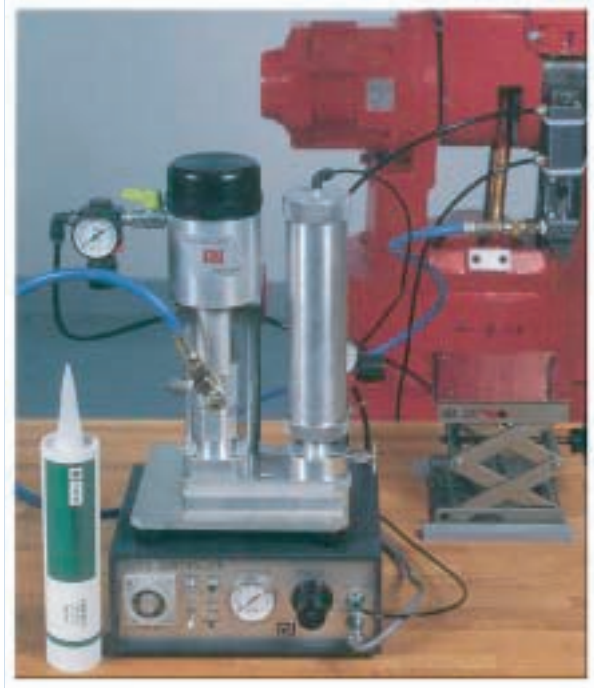
## Precautions for Use

- Store in a cool, dry place, and avoid exposure to direct sunlight.
- Please store one-part products below 10°C to prevent a rise in viscosity. Return to room temperature before opening to avoid condensation.
- Curing of one-part products below 100°C requires time, and adhesive strength may not fully develop. If the substrate can withstand heat exposure, heat should be applied at temperatures over 100°C. Please consider the substrate's capacity to withstand heat and allow for adequate heat exposure time.
- Adequate ventilation should be maintained in the workplace at all times.
- Avoid prolonged contact of uncured material to skin as this may cause irritation.
- Surfaces containing water, sulphur, nitrogen compounds, organic metal compounds, or phosphate compounds may inhibit curing. A sample patch test should always be conducted before proceeding. (Particular care is required for applications involving organic rubber, flux, amin cured epoxy resin, waxes, and condensation cure silicone rubber.)
- Keep out of reach of children.

# Dispensing Equipment



Tube Type



Cartridge Type



Cartridge Type



Pail Type



Drum Type



GE Bayer Silicones



## Americas

GE Silicones

Worldwide HQ:

Waterford, NY

- R&D
- Application development
- Basic manufacturing
- Finishing
- Corporate R&D (Schenectady, NY)



## Europe

GE Bayer Silicones

JV 50,1 % GE : 49.9 % Bayer

European HQ:

Leverkusen, Germany

- R&D
- Application development
- Basic manufacturing
- Finishing



## Asia/Pacific

GE Toshiba Silicones

JV 51 % GE : 49.% Toshiba

Asian HQ:

Ohta, Japan

- R&D
- Application development
- Basic manufacturing
- Finishing



# GE Bayer Silicones

- 50.1 % GE, 49.9 % Bayer in Europe, Middle East, Africa, India
- 800 people
- Headquartered in Leverkusen, Germany

### • Major locations

- Leverkusen (Monomer, Intermediates, Finishing)
- Bergen op Zoom , NL (Sealants Finishing) & European Logistics Center
- Lostock , UK (HTV Rubber Compounding Center)
- Bangalore , India (Sealants Packaging, Rubber Compounding , Fluids Finishing)



## Principal Locations

Regional Information	Phone	Fax
<b>North America</b> World Headquarters 187 Danbury Road Wilton, CT 06897, USA	800.295.2392	607.754.7517
<b>Latin America</b> Av. Nove de Julho, 5229 7º andar 01407-907 São Paulo SP, Brazil	+55.11.3067.8671	+55.11.3067.8680
<b>Europe, Africa and Middle East</b> GE Bayer Silicones GmbH Building V7 D-51368 Leverkusen Germany	+49.214.30.1	+49.214.30.31924
<b>Pacific</b> GE Toshiba Silicones 6-2-31 Roppongi Minato-ku Tokyo 106-8550 Japan	+81.3.3479.5361	+81.3.3479.5391
<b>Customer Service Centers</b>		
<b>North America</b> South Charleston, WV 25303, USA E-mail: cs-na.osi@ge.com	<b>Specialty Fluids</b> 800.523.5862	304.746.1654
	<b>UA, Silanes, Resins, and Specialties</b> 800.334.4674	304.746.1623
	<b>RTV Products-Elastomers</b> 800.332.3390	304.746.1623
	<b>Sealants and Adhesives and Construction</b> 877.943.7325	304.746.1654
<b>Canada</b> St-Eustache, Quebec	Within U.S. & Canada Outside U.S. & Canada	800.363.0496 +450.974.0380 +450.974.0899
<b>Latin America</b> Argentina and Chile Brazil Mexico and Central America Venezuela, Ecuador, Peru, Colombia, and Caribbean E-mail: cs-la.gesos@ge.com	+54.23.2055.2857 +55.11.3067.8671 +52.55.5257.6042 +58.21.2902.5167	+54.23.2055.2811 +55.11.3067.8680 +52.55.5257.6094 +58.21.2902.5158
<b>Europe, Africa and Middle East</b> GE Bayer Silicones GmbH GE Specialty Materials (Suisse) Sarl E-mail: cs-eur.osi@ge.com	800.4321.1000 +41.22.989.2111	+31.164.293156 +41.22.989.2393
<b>Pacific</b> Japan E-mail: helpdesk@getos.co.jp China Korea Singapore	+81.276.20.6182 +86.800.820.0202 +82.2.530.6400 +65.6326.3918	
<b>Worldwide Hotline</b>	<b>800.295.2392</b>	<b>+607.786.8131</b>
		<b>+607.754.7517</b>

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