

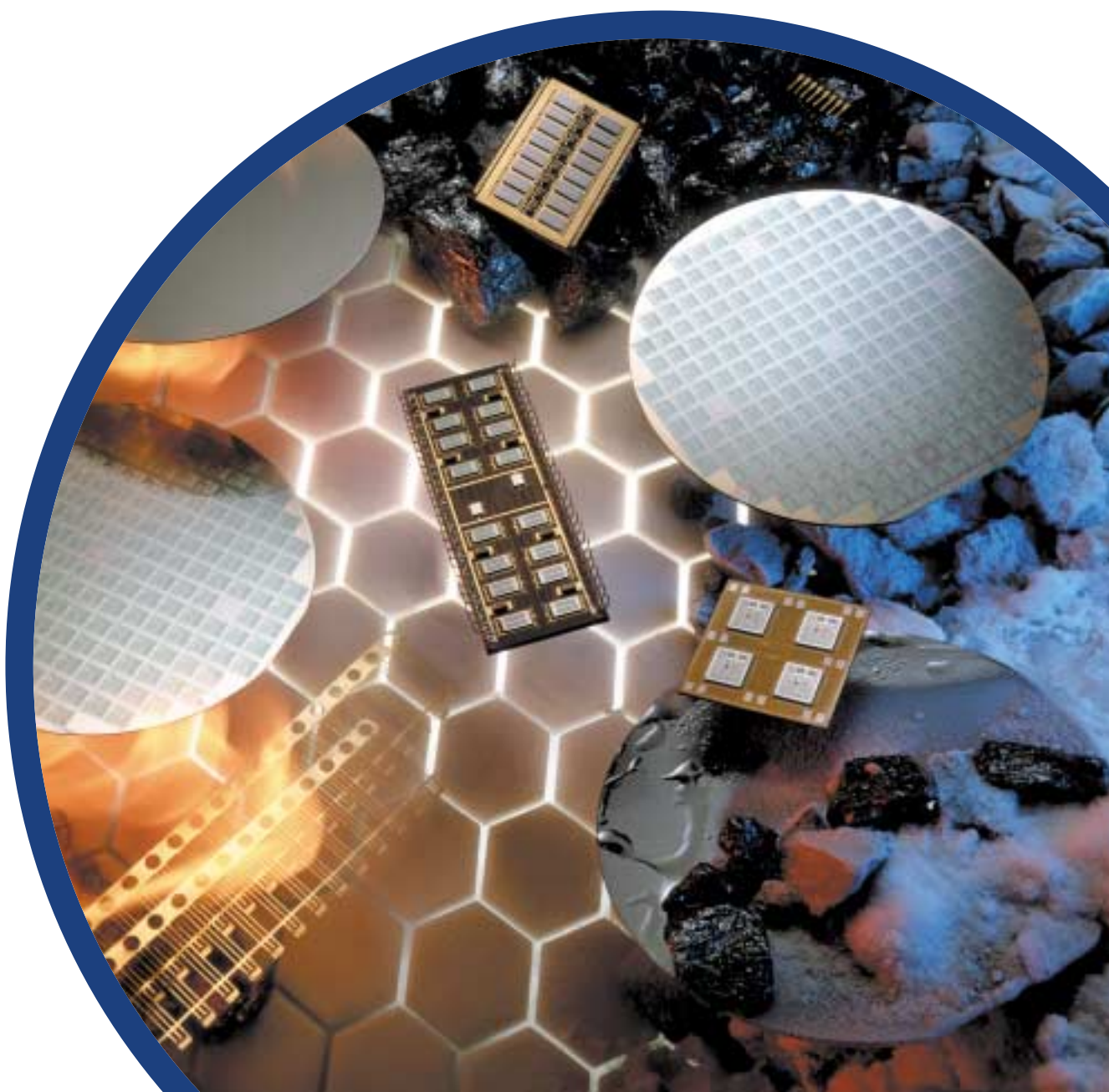
alkoxy cure — addition cure — RTV
thermally conductive — MIL spec

Electronic Materials



Sealants, Adhesives,
Conformal Coatings
& Encapsulants

Material Selector Guide



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Increase Productivity and Performance in Electronics Manufacturing with GE Silicones

As a world leader in silicone technology, GE Silicones offers a complete line-up of industrial adhesives, sealants, gels and encapsulants (please see Gel Selector Guide CDS 5046). Their primary uses are for adhering, bonding parts together; sealing out moisture, environmental contaminants and UV; insulating against mechanical stress, vibration and the effects of thermal cycling; providing electrical protection; and for formed-in-place gasketing (FIPG).

With so many uses, GE silicones are at work worldwide in virtually every industry, offering unparalleled reliability and long-term performance. Silicone, manufactured from silicon, was the first synthetic inorganic material ever made. Silicones, or silicon-based compounds, are remarkable materials, offering a wide range of physical

properties and an almost limitless range of applications. Their high- and low-temperature stability, strength, ultraviolet resistance, and aggressive adhesion to a wide variety of substrates make silicone materials exceptionally versatile and dependable.

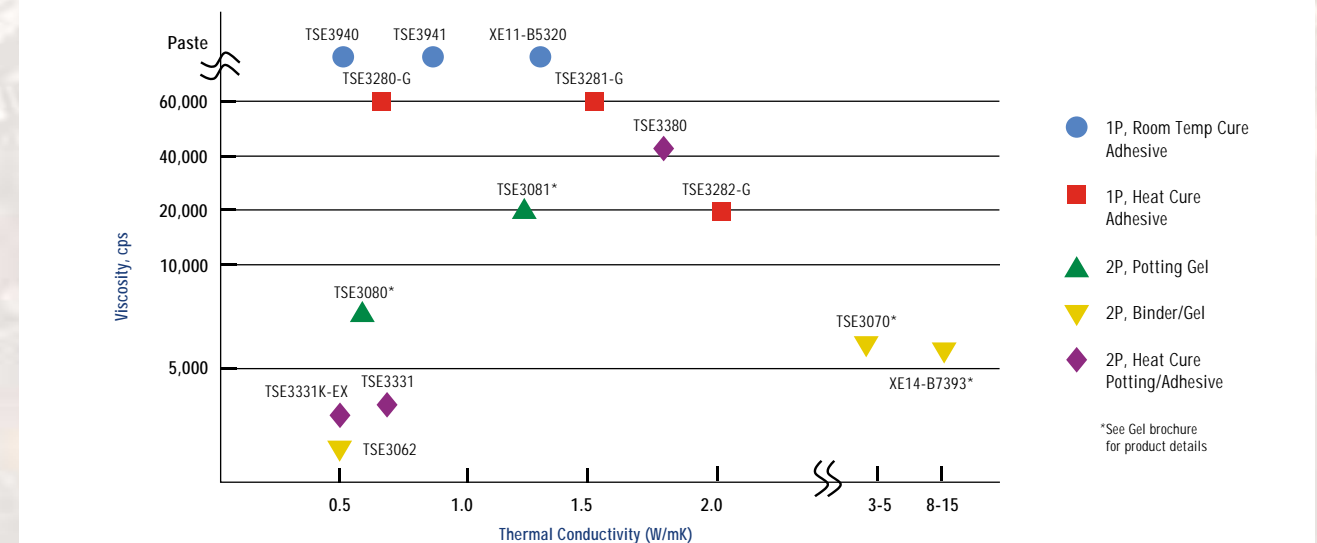
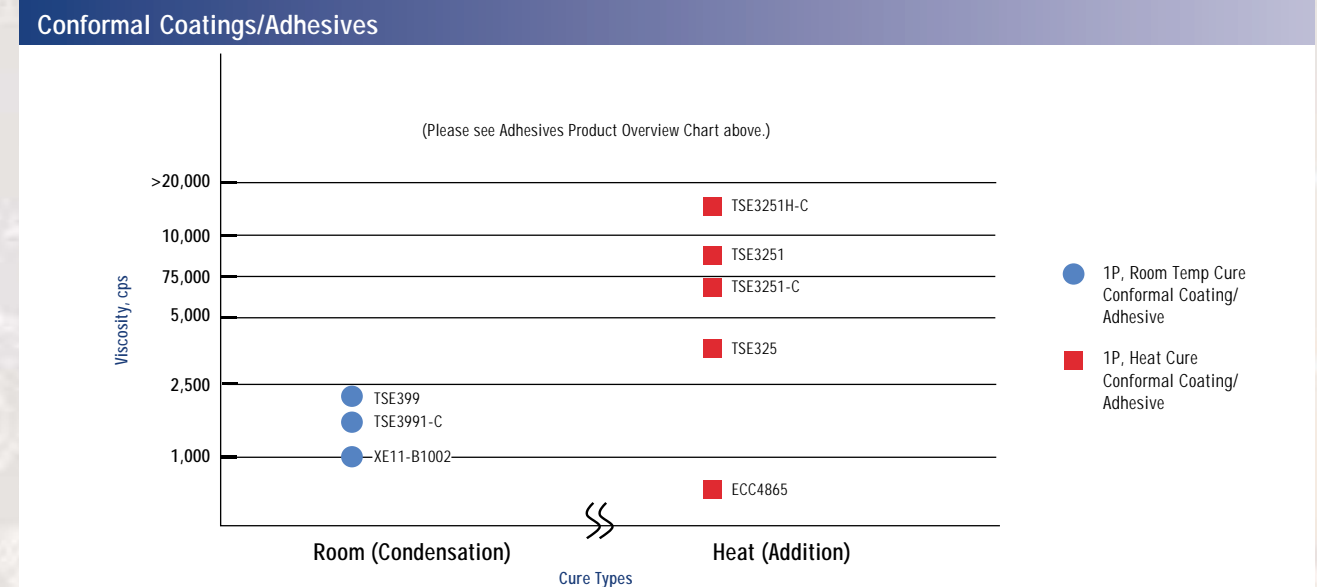
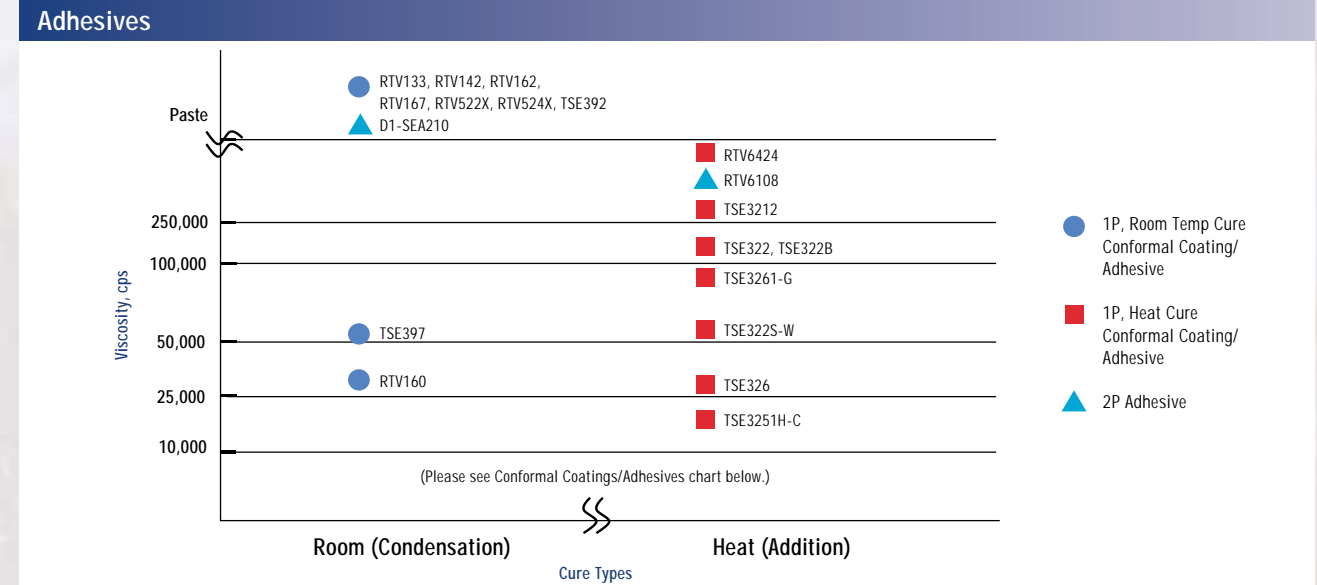
As a global supplier of these unique silicone materials, GE offers the material expertise and application knowledge to meet your specific performance criteria — wherever you are.

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GE Silicones



Product Overview Charts



*See Gel brochure for product details

One-Part RTV Silicone Adhesives & Sealants Room Temperature Cure



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Online: www.GESilicones.com

Call toll-free: 800.255.8886

- 1 Part – no mixing, easy to use
- Non-corrosive – alkoxy/neutral cure
- Condensation (moisture) cure – cures to an elastomeric rubber at room temperature by reacting with moisture in the air
- Primerless adhesion to many substrates

†Material softening may occur between 93 to 200°C (200 to 400°F).

*This rating is based on a standard, small-scale laboratory test and, as such, is not reliable for determining, evaluating, predicting, or describing the flammability or burning characteristics of the product under actual fire conditions. Rating can be dependent on thickness. UL File No. E36952. www.UL.com/plastics

**Testing for the referenced MIL Specs is performed in accordance with current GE Silicones quality test methods, laboratory conditions and procedures, frequency, and sampling, which are not necessarily identical with the methods, conditions, procedures, frequency and sampling stated or referenced in the listed specification. Call 800.255.8886 for additional information on MIL Specs. Any certification will be limited to listed properties and will not imply or state conformity to any other aspect of the referenced specification, including but not limited to marking, packaging, bar coding, testing or sampling. Contact GE Silicones for a comparison review.

Adhesives & Sealants 1-Part, Room Temperature Condensation Cure (Alkoxy/Neutral)

	RTV133 Black	RTV160 White	RTV162 White	RTV167 Gray	RTV5222 White RTV5223 Black RTV5229 Gray	RTV5242 White RTV5243 Black RTV5249 Gray	TSE392-C Translucent TSE392-W White	TSE397-B Black TSE397-C Translucent TSE397-W White	TSE399-B Black TSE399-C Translucent TSE399-W White	TSE3991-C Translucent	XE11-B1002 Translucent
Typical Properties	<ul style="list-style-type: none"> • Black, flame retardant, paste adhesive sealant • Non-corrosive • UL94 V-1 and V-0 recognition* • Use as a sealant on firewalls, flame retardant coating; switching devices, motors and high voltage transformers 	<ul style="list-style-type: none"> • White, semi-flowable, non-corrosive adhesive sealant • Non-corrosive • UL HB recognition* • Use as a thin-section PCB coating 	<ul style="list-style-type: none"> • White, MIL Spec paste adhesive • Non-corrosive • UL HB recognition* • Meets MIL-A-46146B* recognition • Bond capacitors, resistors & integrated circuits to PCBs; seal exposed wires, faying surfaces, connectors 	<ul style="list-style-type: none"> • Light gray, high strength paste adhesive sealant • Non-corrosive • UL HB recognition* • Meets MIL-A-46146** recognition* • Highest strength electronics adhesive sealant • Use for mechanical or electrical bonding and insulating applications 	<ul style="list-style-type: none"> • Paste adhesive sealant • Non-corrosive • UL HB recognition* • Long tooling time • Primerless adhesion 	<ul style="list-style-type: none"> • Paste adhesive sealant • Non-corrosive • UL HB recognition* • Primerless adhesion 	<ul style="list-style-type: none"> • Paste adhesive sealant • Non-corrosive • Meets MIL-A-46146B, corrosion test only • Fast tack-free time • Use for electronic sealing and coating 	<ul style="list-style-type: none"> • Semi-flowable adhesive sealant • Non-corrosive • Meets MIL-A-46146B, corrosion test only • Fast tack-free time • Use for electronic sealing and coating 	<ul style="list-style-type: none"> • Flowable adhesive sealant • Non-corrosive • Meets MIL-A-46146B, corrosion test only • Fast tack-free time • Use for electronic sealing and coating 	<ul style="list-style-type: none"> • Translucent, flowable adhesive sealant • Non-corrosive • Meets MIL-A-46146B, corrosion test only • Fast tack-free time • Use as conformal coating 	<ul style="list-style-type: none"> • Translucent, flowable adhesive sealant • Non-corrosive • Fast tack-free time • Use as conformal coating
Viscosity, cps – flowable products	650 g/min	38,000 cps	530 g/min	180 g/min	185 g/min	300 g/min	Paste	50,000 cps	2,000 cps	1,500 cps	1,000 cps
Application Rate, g/min – paste products											
Useful Temperature, °C (°F)	-60 to 205 (-75 to 400)	-60 to 205 (-75 to 400)	-60 to 205 (-75 to 400)	-60 to 205 (-75 to 400)	-60 to 205 (-75 to 400)†	-60 to 205 (-75 to 400)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)
Specific Gravity	1.23	1.04	1.09	1.12	1.4	1.5	1.04	1.04	1.04	1.03	0.98
Hardness (Type A; TSE products)	—	—	—	—	26	40	30	15	25	19	25
Durometer (Shore A; RTV products)	45	25	35	37	—	—	—	—	—	—	—
Tensile Strength, MPa (psi)	4.51 (650)	1.86 (275)	3.73 (550)	5.49 (800)	2.6 (370)	2.2 (320)	1.6 (228)	1.2 (170)	1.3 (185)	0.7 (102)	0.6 (87)
Elongation, %	250	230	375	600	750	425	430	300	140	150	110
Tack-Free time, min	1 hr	4 hrs	4 hrs	4 hrs	3 hrs	45	5	10	10	10	10
Dielectric Strength, kV/mm (V/mil)	20 (500)	20 (500)	18 (450)	20 (500)	16.5 (420)	20 (500)	22 (560)	22 (560)	20 (500)	18 (450)	18 (450)
Dielectric Constant	2.8 @ 100 Hz	2.8 @ 60 Hz	2.8 @ 60 Hz	2.8 @ 60 Hz	3.9 @ 60 Hz	2.8 @ 60 Hz	2.9 @ 60 Hz	2.9 @ 60 Hz	2.9 @ 60 Hz	2.9 @ 60 Hz	2.9 @ 60 Hz
Packaging	12C, 5GP, 55G	12C, 5GP, 55G	3TG, 5GP, 55G	3TG, 12C, 5GP	12C, 5GP, 55G	12C, 5GP, 55G	100G, 333M, 01K, 18K	100G, 333M, 01K, 18K	100G, 333M, 18K	100G, 333M, 01K, 18K	333M, 18K, 180K

Low Volatile Adhesives/Sealants 1-Part, Room Temperature Condensation Cure (Alkoxy/Neutral)

	RTV142 White	TSE3925-W White
Typical Properties	<ul style="list-style-type: none"> • White, low volatile paste adhesive sealant • Long tooling time • Use for electronic gasketing applications 	<ul style="list-style-type: none"> • White, low volatile paste adhesive sealant • Fast tack-free time • Use for electronic gasketing applications
Useful Temperature, °C (°F)	-60 to 205 (-75 to 400)	-55 to 200 (-67 to 392)
Application Rate, g/min	975	paste
Specific Gravity	1.09	1.04
Hardness (Type A; TSE products)	—	30
Durometer (Shore A; RTV products)	34	—
Tensile Strength, MPa (psi)	3.78 (550)	1.6 (232)
Elongation, %	400	350
Tack-Free time, min	4 hrs	5
Dielectric Strength, kV/mm (V/mil)	19.7 (500)	22 (560)
Dielectric Constant	2.8 @ 60 Hz	2.9 @ 60 Hz
Specifications	Volatile 0.1% max	Volatile Siloxane .028 wt. %
Packaging	06S	100G

Packaging Key

100G	100 gram tube	06S	5.4 fl. oz. cartridge	18K	5 gallon pail (39.6 lbs.)
150G	150 gram tube	12C	10.1 fl. oz. cartridge	20K	5 gallon pail (44 lbs.)
200G	200 gram tube	01K	1 quart can (2.2 lbs.)	55G	55 gallon drum (450 lbs.)
450G	450 gram tube	01P	1 pint bottle	170K	55 gallon drum (374 lbs.)
333M	333 ml cartridge	04K	1 gallon can (8.8 lbs.)	180K	55 gallon drum (400 lbs.)
3TG	2.8 fl. oz. plastic tube	05G/5GP	5 gallon pail	200K	55 gallon drum (440 lbs.)
		15K	5 gallon pail (33 lbs.)		

Thermally Conductive Adhesives 1-Part, Room Temperature Condensation Cure (Alkoxy/Neutral)

	TSE3940 Gray	TSE3941 White	XE11-B5320 White
Typical Properties	<ul style="list-style-type: none"> • Gray, thermally conductive, (0.41 W/m²K) paste adhesive sealant • UL94 V-0 recognition (File E56745)* • Meets MIL-A-46146B, corrosion only • Fast tack-free time 	<ul style="list-style-type: none"> • White, thermally conductive, (0.83 W/m²K) paste adhesive sealant • UL94 V-1 recognition (File E56745)* • Meets MIL-A-46146B, corrosion only • Fast tack-free time 	<ul style="list-style-type: none"> • White, thermally conductive (1.3 W/m²K), low volatile, paste adhesive sealant • Low volatility • Highest thermal conductivity room temperature curing adhesive • Fast tack-free time
Useful Temperature, °C (°F)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)
Thermal Conductivity, W/m ² K	0.41	0.83	1.3
Viscosity	paste	paste	paste
Specific Gravity	1.49	1.65	2.59
Hardness, Type A	40	65	83
Tensile Strength, MPa (psi)	2.9 (426)	2.9 (426)	4.1 (595)
Elongation, %	200	100	50
Tack-Free time, min	5	5	5
Dielectric Strength, kV/mm (V/mil)	21 (530)	22 (560)	17 (431)
Dielectric Constant	4.5 @ 60 Hz	4.0 @ 60 Hz	2.6 @ 60 Hz
Packaging	150G, 450G	150G, 333M, 20K	333M

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800.255.8886.

One-Part Silicone Adhesives & Sealants

Heat Accelerated Cure



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Online: www.GESilicones.com

Call toll-free: 800.255.8886

- 1 Part – no mixing, easy to use
- Non-corrosive
- Addition (heat) cure – cures to an elastomeric rubber when exposed to heat
- Primerless adhesion to many substrates

Adhesives 1-Part, Heat (Addition) Cure

	ECC4865 Clear	TSE325 White	TSE3251-C Translucent	TSE3251 White	TSE3251H-C Translucent	TSE3221S-W White	TSE322S Light Blue	TSE322 Light Blue TSE322B Black	TSE3212 White
Typical Properties	<ul style="list-style-type: none"> • Clear, flowable heat cure conformal coating • Excellent primerless adhesion to many substrates 	<ul style="list-style-type: none"> • White, flowable, adhesive sealant • Neutral cure • Non-corrosive sealant for potting, coating and sealing applications 	<ul style="list-style-type: none"> • Translucent, semi-flowable adhesive sealant • Non-corrosive sealant for potting, coating and sealing applications 	<ul style="list-style-type: none"> • White, semi-flowable adhesive sealant • Non-corrosive sealant for potting, coating and sealing applications 	<ul style="list-style-type: none"> • Semi-flowable adhesive sealant • Non-corrosive heat-curing adhesive for electronics sealing, bonding and coating 	<ul style="list-style-type: none"> • White, semi-flowable heat cureable adhesive sealant • Non-corrosive heat-curing adhesive for electronics sealing, bonding and coating 	<ul style="list-style-type: none"> • Semi-flowable adhesive sealant • Non-corrosive heat-curing adhesive for electronics sealing, bonding and coating • Use as a thermal barrier for automotive parts; as a fabric seam seal 	<ul style="list-style-type: none"> • Flowable paste adhesive sealants • Non-corrosive heat-curing adhesive for electronics sealing; bonding and coating • Use as a thermal barrier for automotive parts; as a fabric seam seal 	<ul style="list-style-type: none"> • White, high viscosity paste adhesive sealant • For ceramic board to metal case for hybrid ICs
Useful Temperature Range, °C (°F)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)	-55 to 200 (-67 to 392)
Viscosity, cps	250	4,000	7,000	8,500	13,000	55,000	70,000	110,000	280,000
Specific Gravity	1.19	1.02	1.02	1.02	1.03	1.03	1.26	1.27	1.26
Hardness, Type A	35	12	16	16	17	30	37	45	52
Tensile Strength, MPa (psi)	—	0.7 (102)	0.7 (102)	0.7 (102)	1 (145)	2.8 (406)	3.6 (522)	3.4 (493)	3.7 (537)
Elongation, %	—	200	200	200	220	330	230	230	240
Dielectric Strength, kV/mm (V/mil)	(20) 500	21 (530)	20 (500)	20 (500)	20 (500)	25 (635)	25 (635)	20 (500)	20 (500)
Dielectric Constant	2.4 @ 60 Hz	2.9 @ 60 Hz	2.8 @ 60 Hz	2.8 @ 60 Hz	2.8 @ 60 Hz	2.8 @ 60 Hz	3.1 @ 60 Hz	3.1 @ 60 Hz	3.2 @ 60 Hz
Packaging	—	01K, 18K	333M, 01K	333M, 01K	01K	18K	100G, 333M, 01K	100G, 01K, 20K	100G, 333M, 01K
Processing									
Cure Time**	105°C min 175°C max	100°C (212°F) 4 hrs 120°C (248°F) 2 hrs 150°C (302°F) 1 hr	100°C (212°F) 4 hrs 120°C (248°F) 2 hrs 150°C (302°F) 1 hr	100°C (212°F) 4 hrs 120°C (248°F) 2 hrs 150°C (302°F) 1 hr	100°C (212°F) 4 hrs 120°C (248°F) 2 hrs 150°C (302°F) 1 hr	100°C (212°F) 4 hrs 120°C (248°F) 2 hrs 150°C (302°F) 1 hr	100°C (212°F) 3 hrs 125°C (256°F) 1.5 hrs 150°C (302°F) 1 hr	100°C (212°F) 3 hrs 120°C (248°F) 1.5 hrs 150°C (302°F) 1 hr	100°C (212°F) 3 hrs 120°C (248°F) 1.5 hrs 150°C (302°F) 1 hr

1-Part, Heat (Addition) Cure

High Temperature Adhesives

Thermally Conductive Adhesives

	TSE326 Red	TSE3261-G Gray	TSE3280-G Gray	TSE3281-G Gray	TSE3282-G Gray
Typical Properties	<ul style="list-style-type: none"> • Red, semi-flowable high temperature adhesive • UL HB recognition (File E56745)* • Non-corrosive adhesive for high heat assembly, gasketing and coating applications 	<ul style="list-style-type: none"> • Gray, semi-flowable high temperature adhesive • Sealing and bonding for high-temperature applications 	<ul style="list-style-type: none"> • Dark gray, thermally conductive, (0.88 W/m²K) semi-flowable adhesive sealant • Excellent primerless adhesion 	<ul style="list-style-type: none"> • Dark gray, thermally conductive, (1.66 W/m²K) semi-flowable adhesive sealant • Excellent primerless adhesion 	<ul style="list-style-type: none"> • Dark gray, thermally conductive, (2.0 W/m²K), flowable adhesive sealant • Excellent primerless adhesion
Viscosity, cps	28,000	80,000	60,000	60,000	20,000
Specific Gravity	1.45	1.48	2.1	2.7	2.7
Hardness, Type A	43	54	62	84	80
Tensile Strength, MPa (psi)	3.4 (498)	4.9 (755)	3.2 (470)	4.51 (654)	4.0 (580)
Elongation, %	170	160	110	50	50
Dielectric Strength, kV/mm (V/mil)	22 (558)	22 (558)	21 (530)	15 (380)	23 (570)
Dielectric Constant	3.3 @ 60 Hz	3.3 @ 60 Hz	4.3 @ 60 Hz	5.2 @ 60 Hz	5.5 @ 60 Hz
Packaging	01K, 20K, 200K	15K	200G	01K	200G, 01K
Processing					
Cure Time**	100°C (212°F) 4 hrs 125°C (256°F) 2 hrs 150°C (302°F) 1 hr	120°C (248°F) 2 hrs 150°C (302°F) 1 hr 180°C (356°F) 10 min	Min. 100°C (212°F)	Min. 100°C (212°F)	Min. 100°C (212°F)

Packaging Key

100G	100 gram tube	06S	5.4 fl. oz. cartridge	18K	5 gallon pail (39.6 lbs.)
150G	150 gram tube	12C	10.1 fl. oz. cartridge	20K	5 gallon pail (44 lbs.)
200G	200 gram tube	01K	1 quart can (2.2 lbs.)	55G	55 gallon drum (450 lbs.)
450G	450 gram tube	01P	1 pint bottle	170K	55 gallon drum (374 lbs.)
333M	333 ml cartridge	04K	1 gallon can (8.8 lbs.)	180K	55 gallon drum (400 lbs.)
3TG	2.8 fl. oz. plastic tube	05G/5GP	5 gallon pail	200K	55 gallon drum (440 lbs.)
		15K	5 gallon pail (33 lbs.)		

*This rating is based on a standard, small-scale laboratory test and, as such, is not reliable for determining, evaluating, predicting, or describing the flammability or burning characteristics of the product under actual fire conditions. Rating can be dependent on thickness. UL File No. E36952. www.UL.com/plastics

**The actual cure time is application specific and will depend on such factors as cross-sectional thickness of the applied material, the thermal properties of the overall assembly, oven type and efficiency, and oven loading.

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800.255.8886.

Two-Part RTV Silicone Potting & Encapsulating Compounds

Room Temperature
Condensation Cure



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Call toll-free: 800.255.8886

*With the exception of RTV12 and SEA210, the materials on this page do not adhere to substrates without primer. If adhesion is required, use one of the following primers.

Primer	Use For	Use With
SS4004P SS4044P	General Purpose	1C, 2C
SS4179	Plastics & General Purpose	1C
SS4155	General Purpose	1C, 1A, 2A, 2C
SS4120	Where Clarity Is Needed	1A, 2A

C – Condensation Cure
A – Addition Cure

**Two-Part Condensation Cure Catalyst Options:

DBT	(Standard unless otherwise specified) (slow to moderate cure) liquid – mix ratio = 200:1 standard catalyst, long work life
STO	(fast cure, short work life) liquid – mix ratio = 200:1 best choice for reversion resistance
RTV9811	(moderate to fast cure) paste – mix ratio = 10:1 best choice for deep section cures (>1")
RTV9910	(slow cure) paste – mix ratio = 10:1 DBT for meter/mix equipment
RTV9950	(moderate cure) paste – mix ratio = 10:1 DBT for meter/mix equipment

Catalysts can be inhibited by such materials as water, sulfur, amines and latex gloves. A patch test on the substrate should be conducted to check compatibility.

2-Part Room Temp Cure	General Purpose							
	RTV11 White • General purpose electrical potting • High voltage power supply potting	RTV12 Clear • General purpose potting requiring clear, RT cure • Offers primerless adhesion	RTV21 Pink • Aerospace thermal insulation • Thick-section potting • Pour-in-place gasketing	RTV41 White • Release coating on metal panels and other substrates	D1-SEA210 Gray or Black • Fast room temperature cure, paste • Primerless adhesion	RTV8111 White • Meets requirements of MIL-S-23586E/MIL-PRF-23586F Type I, Class 1, Grade B1	RTV8112 White • Meets requirements of MIL-S-23586E/MIL-PRF-23586F Type I, Class 2, Grade A	RTV8262 Red • Meets requirements of MIL-S-23586E/MIL-PRF-23586F Type II, Class 2, Grade A • High temperature
Typical Properties								
Catalyst	**	RTV12C	**	**	SEA210B (gray) or SEA213B (black)	RTV9891	RTV9858	RTV9858
Mix Ratio (base to curing agent by weight)	100 : 0.5	20 : 1	100 : 0.5	100 : 0.5	100 : 8	100 : 2	100 : 5	100 : 5
Viscosity, cps (@ 25°C/77°F)	11,000	1,500	26,000	39,000	120 g/min	9,900	11,000	47,000
Specific Gravity	1.19	1.00	1.32	1.31	—	1.18	1.19	1.47
Hardness, Shore A Durometer	41	18	45	47	37	45	42	52
Tensile Strength, MPa (psi)	2.06 (300)	—	2.16 (310)	2.16 (310)	2.03 (295)	2.45 (350)	2.06 (300)	4.02 (580)
Elongation, %	160	200	180	180	255	160	160	150
Tear Resistance (Die B), kg/cm (lb/inch)	3.5 (20)	—	7.1 (40)	5.2 (29)	—	4.3 (24)	4.8 (27)	7.7 (43)
Linear Shrinkage, %	0.6	2	0.6	0.6	—	1.0	1.0	0.6
Useful Temperature Range (continuous), °C (°F)	-54 to +204 (-65 to +400)	-54 to +204 (-65 to +400)	-54 to +204 (-65 to +400)	-54 to +204 (-65 to +400)	-45 to +125 (-50 to +200)	-54 to +204 (-65 to +400)	-54 to +204 (-65 to +400)	-54 to +260 (-65 to +500)
Thermal Conductivity, W/m ² K	0.29	0.17	0.31	0.31	—	0.29	0.29	0.31
Coefficient of Thermal Expansion (Linear CTE), cm/cm °C (in/in °F)	25 x 10 ⁻⁵ (14 x 10 ⁻⁵)	29 x 10 ⁻⁵ (16 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	—	25 x 10 ⁻⁵ (14 x 10 ⁻⁵)	25 x 10 ⁻⁵ (14 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)
Dielectric Strength (75 mils), kV/mm (V/mil)	20.3 (515)	15.7 (400)	16.5 (420)	20.3 (515)	18.8 (478)	19.7 (500)	18.7 (475)	18.5 (470)
Dielectric Constant (1 kHz)	3.3	3.0	3.8	3.7	3.6	3.3	4.02	3.9
Dissipation Factor (1 kHz)	0.006	0.001	0.02	0.007	0.0045	0.0055	0.007	0.017
Volume Resistivity, ohm-cm	1.1 x 10 ¹⁵	1.0 x 10 ¹³	2.6 x 10 ¹⁴	1.6 x 10 ¹⁴	3.4 x 10 ¹⁴	1.0 x 10 ¹⁵	2.7 x 10 ¹⁵	4.4 x 10 ¹⁴
Specifications	FDA —	— —	— —	FDA —	— —	MIL-S-23586E, MIL-PRF-23586F* Type I, Class 1, Grade B1	MIL-S-23586E, MIL-PRF-23586F* Type I, Class 2, Grade A	MIL-S-23586E, MIL-PRF-23586F* Type II, Class 2, Grade A
Packaging	1, 12, 50, 500 lb. kits	1, 42, 420 lb. kits	1, 12, 50, 500 lb. kits	12, 50, 500 lb. kits	10, 50, 500 lbs.	1, 12, 500 lb. kits	1, 12, 500 lb. kits	1, 12, 500 lb. kits
Processing								
Work (Pot) Life, 25°C/77°F	1.5 hours	1.6 hours	1 hour	1 hour	35 minutes	30 minutes	2 hours	2 hours
Cure Time (@ 50% RH), 25°C/77°F	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours

2-Part Room Temp Cure	Extreme High Temperature	Extreme High & Low Temperature			Extreme Low Temperature			
	RTV31 Red • Potting surge protectors on telephone poles • Potting industrial filters • High temp. electrical potting applications • Mechanical protection	RTV60 Red • Aerospace applications such as potting, encapsulating, coating and cushioning	RTV88 Red • Potting surge protectors • Aerospace applications such as sealing, bonding and gasketing on vertical or overhead surfaces	RTV560 Red • Aerospace applications such as potting, sealing and bonding, where extreme high/low temp. service is required	RTV566 Red • Ideal for applications such as aerospace, requiring a low outgassing product	RTV511 White • Potting, encapsulating and coating electronic assemblies and components	RTV567 Translucent • Applications requiring a low outgassing product	RTV577 White • Aerospace applications such as sealing and insulating • Vertical and overhead surfaces
Typical Properties								
Catalyst	**	**	**	**	RTV566B	**	RTV567B	**
Mix Ratio (base to curing agent by weight)	100 : 0.5	100 : 0.5	100 : 0.5	100 : 0.5	100 : 0.1	100 : 0.5	100 : 0.1	100 : 0.5
Viscosity, cps (@ 25°C/77°F)	25,000	47,000	880,000	30,000	42,700	16,000	3,900	700,000
Specific Gravity	1.42	1.48	1.47	1.42	1.49	1.21	1.00	1.35
Hardness, Shore A Durometer	54	57	58	55	61	42	20	48
Tensile Strength, MPa (psi)	5.98 (870)	6.86 (990)	5.79 (830)	4.71 (690)	5.49 (800)	2.65 (380)	—	3.04 (440)
Elongation, %	170	120	120	120	120	170	—	150
Tear Resistance (Die B), kg/cm (lb/inch)	5 (29)	7 (40)	8 (42)	5.5 (31)	—	3.8 (21)	—	6.8 (38)
Linear Shrinkage, %	0.6	0.6	0.6	1.0	0.6	1.3	0.6	0.65
Useful Temperature Range (continuous), °C (°F)	-54 to +260 (-65 to +500)	-54 to +260 (-65 to +500)	-54 to +260 (-65 to +500)	-115 to +260 (-175 to +500)	-115 to +260 (-175 to +500)	-115 to +204 (-175 to +400)	-115 to +204 (-175 to +400)	-115 to +204 (-175 to +400)
Thermal Conductivity, W/m ² K	0.31	0.31	0.31	0.31	0.31	0.26	0.29	0.31
Coefficient of Thermal Expansion (Linear CTE) cm/cm °C (in/in °F)	20 x 100 ⁻⁵ (11 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)	22 x 10 ⁻⁵ (12 x 10 ⁻⁵)	25 x 10 ⁻⁵ (14 x 10 ⁻⁵)	20 x 10 ⁻⁵ (11 x 10 ⁻⁵)
Dielectric Strength (75 mils), kV/mm (V/mil)	17 (430)	17.7 (450)	17.4 (440)	21.2 (540)	21.2 (540)	20.5 (520)	20.3 (515)	18.5 (470)
Dielectric Constant (1 kHz)	4.4	4.0	4.3	3.9	3.9	3.6	3.3	3.98
Dissipation Factor (1 kHz)	0.03	0.02	0.03	0.02	0.02	0.005	0.006	0.02
Volume Resistivity, ohm-cm	1.6 x 10 ¹⁴	4.4 x 10 ¹⁴	2.8 x 10 ¹⁴	2 x 10 ¹⁴	2 x 10 ¹⁴	2 x 10 ¹⁴	1.1 x 10 ¹⁵	5.6 x 10 ¹⁴
Specifications	—	—	—	—	Low Volatile	—	Low Volatile	—
Packaging	1, 12, 50, 500 lb. kits	1, 12, 50, 500 lb. kits	1, 12, 13, 50, 55, 500 lb. kits	12 lb. kit	1 lb. kit	1, 12, 50, 500 lb. kits	1 lb. kit	1, 12 lb. kits
Processing								
Work (Pot) Life, 25°C/77°F	2 hours	2 hours	45 minutes	2.25 hours	1.5 hours	1.5 hours	9 hours	2 hours
Cure Time (@ 50% RH), 25°C/77°F	24 hours	24 hours	24 hours	24 hours	24 hours	24 hours	7 days	24 hours

Packaging Key					
100G	100 gram tube	06S	5.4 fl. oz. cartridge	18K	5 gallon pail (39.6 lbs.)
150G	150 gram tube	12C	10.1 fl. oz. cartridge	20K	5 gallon pail (44 lbs.)
200G	200 gram tube	01K	1 quart can (2.2 lbs.)	55G	55 gallon drum (450 lbs.)
450G	450 gram tube	01P	1 pint bottle	170K	55 gallon drum (374 lbs.)
333M	333 ml cartridge	04K	1 gallon can (8.8 lbs.)	180K	55 gallon drum (400 lbs.)
3TG	2.8 fl. oz. plastic tube	05G/5GP	5 gallon pail	200K	55 gallon drum (440 lbs.)
		15K	5 gallon pail (33 lbs.)		

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800.255.8886.

Two-Part Silicone Potting & Encapsulating Compounds

Addition/Room & Heat Cure



GESilicones-Electronics.com
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Online: www.GESilicones.com
Call toll-free: 800.255.8886

2-Part Addition Cure	General Purpose						Extreme Low Temperature	Low Volatile
	RTV615 Clear • Solar cell potting • Optical instruments • Applications requiring visual identification of potted assemblies	RTV627 Dark Gray • Power supply encapsulation • Flyback transformer encapsulation	RTV630 Blue • Encapsulation applications requiring high tensile strength • RTV630M Lower viscosity (90,000 cps)	RTV6108 Translucent • High viscosity primerless adhesive and gasketing • Heat cure only	RTV6428 Dark Gray • Power supply encapsulation of temperature limited assemblies • "Snap" cure • Automotive systems	TSE3033 Clear • Low viscosity, clear encapsulant • Primerless adhesion • Heat cure only	RTV656 Clear • Aerospace potting, bonding and sealing where extended low temperature performance is required	LVG342 White • White, paste, low volatile adhesive • Excellent compression set & CSR properties • Excellent gasketing material
Properties								
Mix Ratio (base to curing agent by weight)	10 : 1	1 : 1	10 : 1	1 : 1	1 : 1	1 : 1	10 : 1	10 : 1
Viscosity, cps/Appl Rate	4,000	1,270	150,000	500,000	1,300	1,000	4,000	150 g/min
Specific Gravity	1.02	1.37	1.28	1.08	1.37	1.01	1.02	1.19
Hardness, Shore A Durometer	44	62	60	40	62	30	44	40
Tensile Strength, MPa (psi)	6.37 (920)	3.24 (475)	5.69 (820)	5.17 (750)	3.24 (475)	1.0 (142)	6.37 (920)	4.5 (650)
Elongation, %	160	60	250	450	60	130	160	275
Tear Resistance (Die B), kg/cm (lb/inch)	—	3.4 (19)	20 (110)	210	3.4 (19)	—	—	NA
Useful Temperature Range, °C (°F)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-115 to +204 (-175 to +400)	-60 to +204 (-75 to +400)
Dielectric Strength, kV/mm (V/mil)	19.7 (500)	20.1 (510)	17.7 (450)	19.7 (500)	21 (530)	21 (530)	20 (500)	(20) 500
Dielectric Constant (1 kHz)	2.89	2.97	3.2	2.85	3.0	2.8 @ 60 Hz	2.89	NA
Specifications	FDA	UL94 V-1 and V-0**	—	—	UL94 V-1 and V-0**	—	FDA	<200 ppm volatile siloxane
Volume Resistivity, ohm cm	1.8 x 10 ¹⁵	5.7 x 10 ¹⁴	4.5 x 10 ¹⁵	2.9 x 10 ¹⁴	5.7 x 10 ¹⁴	2 x 10 ¹⁵	3.2 x 10 ¹⁵	1x10 ¹⁴
Packaging	1, 10, 44, 440 lb. kits	2, 1M, 22, 100 lb. kits	1, 10, 44, 495 lb. kits	1, 80 lb. kits	2, 1M, 100 lb. kits	1 kg can, 18 kg pail	1, 10, 44, 440 lb. kits	LVG342A 5GP/LVG342B 1GP
Processing								
Work (Pot) Life, 25°C/77°F	4 hours	2 hours	4 hours	48+ hours	4 minutes	6 hours	4 hours	12 hours
Cure Time (@50% RH)								
25°C (77°F)	7 days	2 days	7 days	—	30 minutes	—	7 days	NA
65°C (149°F)	4 hours	4 hours	4 hours	—	15 minutes	4 hours (BOC)	4 hours	NA
100°C (212°F)	1 hour	1 hour	1 hour	1 hour	10 minutes	2 hours	1 hour	NA
125°C (256°F)	45 minutes	45 minutes	45 minutes	45 minutes	5 minutes	—	45 minutes	20 min
150°C (302°F)	15 minutes	15 minutes	15 minutes	15 minutes	2 minutes	30 minutes	15 minutes	15 min

2-Part Heat (Addition) Cure – Thermally Conductive Potting

	TSE3331K-EX Dark Gray	TSE3331 Dark Gray	TSE3380 Gray
Properties	• Dark gray, thermally conductive (0.53 W/m ² K), flowable primerless compound • UL94 V-0* • Heat cure only	• Dark gray, thermally conductive (0.63 W/m ² K), flowable primerless compound • UL94 V-0* • Heat cure only	• Gray, thermally conductive (1.68 W/m ² K), semi-flowable primerless compound • Heat cure only
Mix Ratio (base to curing agent by weight)	1 : 1	1 : 1	1 : 1
Mixed Viscosity, cps	2,600	3,500	40,000
Thermal Conductivity, W/m ² K	0.53	0.63	1.68
Specific Gravity	1.43	1.51	2.7
Hardness, Type A	45	60	70
Tensile Strength, MPa (psi)	3.1 (450)	2.9 (420)	2.5 (363)
Elongation, %	120	50	100
Useful Temperature Range, °C (°F)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)	-60 to +204 (-75 to +400)
Dielectric Strength, kV/mm (V/mil)	22 (560)	20 (500)	15 (381)
Dielectric Constant	3.1 @ 60 Hz	3.3 @ 60 Hz	5.7 @ 60 Hz
Specifications	UL94 V-0*	UL94 V-0*	—
Packaging	20K	01K, 25K	01K
Processing			
Min Cure Temperature, °C (°F)**	120 (248)	100 (212)	150 (302)

*This rating is based on a standard, small-scale laboratory test and, as such, is not reliable for determining, evaluating, predicting, or describing the flammability or burning characteristics of the product under actual fire conditions. Rating can be dependent on thickness. UL File No. E36952. www.UL.com/plastics

**The actual cure time is application specific and will depend on such factors as cross-sectional thickness of the applied material, the thermal properties of the overall assembly, oven type and efficiency, and oven loading.

The materials on this page require a primer to obtain a chemical bond to various substrates.

For A Chemical Bond		
use	SS4155	Blue
or	SS4120	Clear

Typical product data values should not be used as specifications. Assistance and specifications are available by contacting GE Silicones at 800.255.8886.

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Americas

GE Silicones

GE Silicones
World Headquarters
Waterford, New York
Technical Assistance:
800-255-8886
U.S. & Canada
518-237-3330
Customer Service:
800-332-3390

GE Canada Inc.

Mississauga, Ontario
Telephone: 800-668-4544
Customer Service:
800-332-3390

GE Silicones Latin America

Col. Santa Fe, Mexico
Telephone: 52-55-5257-6095
Customer Service:
52-55-5257-6094

Europe

GE Bayer Silicones

GE Bayer Silicones GmbH & Co KG
Bergen op Zoom
The Netherlands
Telephone: 31-16429-3882
Fax: 31-16429-1819

GE Bayer Silicones GmbH & Co KG

Leverkusen, Germany
Telephone: 49-21430-31922
Fax: 49-21430-28435

Pacific

GE Toshiba Silicones

GE Toshiba Silicones
Tokyo, Japan
Telephone: 81-276-20-6182
Fax: 81-276-31-6259

GE Toshiba Silicones (Hong Kong) Ltd.

Causeway Bay, Hong Kong
Telephone: 852-2884-6003
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