Information about *Dow Corning*® Brand Adhesive/Sealants

Silicones and Electronics

Archeological evidence shows that adhesives have been in use for millennia, and many objects can be seen in museums that are still bonded with adhesives after 3,000 years or more. While you may not need that extreme of long-term, reliable protection, you still want your adhesive to outlast your device.

While our track record may not be thousands of years old, we have been making adhesives for electronics almost since their inception. Many Dow Corning products have been in continuous use for 30 years or more and are still being applied today, testifying to the suitability of silicone adhesives for electronics. Silicones have long been known for durable dielectric insulation, as barriers against environmental contaminants and for their stress-relieving shock and vibration absorption. They can sustain their physical and electrical properties over a wide range of temperature, humidity and other harsh environmental conditions.

Developments over the years have allowed Dow Corning to add special properties to this durable material foundation in response to your needs. Some of the more recent developments include:

- · Fast tack-free
- · Lower volatility
- · Faster or lower temperature cure
- Adhesion to difficult current and future substrates

Some of the applications with special needs for which we are currently developing materials include:

- PDP and LCD terminal sealing
- · Automotive electronics module and sensor sealing
- · Power supply and SMPS adhering
- · Electrical instrument adhering and sealing
- Circuit board laminating and adhering

Dow Corning[®] brand Adhesives are supplied in three product forms:

One-Part Moisture Cure RTV

Dow Corning one-part moisture cure adhesives are generally cured at room temperature and in a range of 20 to 80 percent relative humidity. Greater than 90 percent of their full physical properties should be attained within 24 to 72 hours depending on the product chosen and application specifics. These materials are not typically used for highly confined or deep section cures. Materials will generally cure about 0.25 inch per seven days from any exposed surface. Cure progresses from the outer surface and is dependent on the moisture in the air. Materials and parts can generally be handled within a few minutes to an hour or two once a surface skin forms. Mild heat acceleration of the cure rate may be possible, but temperatures above 60°C (140°F) are not recommended.

Two-Part Room Temperature Condensation Cure

Dow Corning two-part RTV adhesives cure rapidly at room temperature after mixing. Good strength is attained within an hour but full properties are not reached for a number of days. These adhesives contain their own source of moisture, and cure progresses evenly throughout the material. Deep-section or confined cures are possible; however, some limitations exist. Refer to the "Reversion" section of this datasheet for additional information.

Room temperature adhesives contribute to lower manufacturing costs by avoiding the energy required for heat cure adhesives. These adhesives are also well suited for temperature-sensitive substrates that preclude the use of heat cure adhesives.

Heat Cure

Most *Dow Corning* addition-curing adhesives should be cured at 90°C (198°F) or above; however, *Dow Corning*® SE 1720 CV has been formulated to cure quickly down to as low as 70°C (158°F). The cure rate is rapidly accelerated with heat (see cure schedules in table). For thicker sections or if voiding is observed, use of one of the newer low-voiding adhesives or a 30-minute pre-cure at 70°C (158°F) may reduce voids in the elastomer. Addition-curing materials contain all the ingredients needed for cure with no byproducts from the cure mechanism. Deep-section or confined cures are possible. Cure progresses evenly throughout the material.

DOW CORNING

Heat cure adhesives can improve manufacturing throughput due to shorter cure times. The longer working times of heat cure adhesives provide improved manufacturing flexibility. A range of cure temperature options is available to optimize heat and energy costs.

Custom Solutions

Fast Formulation

Dow Corning manufactures a wide variety of adhesives to meet the needs of most application and process situations, and we are continuously expanding the product offerings in each of these families to ensure that there are products to meet your needs. However, if you cannot find a match for your needs, Dow Corning can modify any of our existing products to help meet your exact needs through our *Fast Formulation* process. A few examples of how *Fast Formulation* can help meet your exact needs include: modification of product cure schedule, modulus, viscosity or color, or adding/removing an inert intermediate such as UV indicator – all in a timely manner.

Total Support

Product Finder – Dow Corning features a unique interactive product finder on our website. This tool can help you pick the right materials for your applications; you can access the product finder at **www.dowcorning.com/electronics** and selecting "Technical Details" on any of our product family pages.

Production of Prototype Coated Boards or Process Design

We can produce sample parts, boards or test coupons and patterns for early evaluation of an adhesive's abilities and adhesives can be applied simulating your own process. Based on our extensive industry experience, we can advise you on the best methods and conditions for your process.

Analytical, Environmental, and Physical Testing

We have expertise to share on a wide range of testing to monitor quality, for specialized testing for trouble-shooting, or to simulate accelerated service conditions.

Equipment Recommendations

Over many years of providing materials for electronics protection, Dow Corning has developed strong alliances with key equipment suppliers worldwide. We have launched the External Equipment Provider Alliance with nine leading companies. Save time and expense by taking advantage of these alliances to ensure the optimum integration of material and processing.

Consultation with Technical Experts

Have our experts visit your facility or join us at one of our global application centers to work together on your material and processing needs. We can provide seminars and training for your personnel to allow them to work more knowledgably. With material, process, and equipment integration solutions from Dow Corning, you can manufacture more modules and assemblies in less time, at less cost, with fewer shutdowns and fewer customer rejects.

Tutorials

An adhesive tutorial can be found on our web site. It is accessible from the product family pages or the left hand navigation bar under Technical Library.

Product/Application Information

PREPARING SURFACES

All surfaces should be thoroughly cleaned and/or degreased with naphtha, mineral spirits, methyl ethyl ketone (MEK), or other suitable solvent. Light surface abrasion is recommended whenever possible, because it promotes good cleaning and increases the surface area for bonding. A final surface wipe with acetone or IPA is also useful. Some cleaning techniques may provide better results than others; users should determine the best techniques for their particular applications.

ADHESION

Dow Corning silicone adhesives are specially formulated to provide unprimed adhesion to many reactive metals, ceramics, and glass, as well as to selected laminates, resins, and plastics. However, good adhesion cannot be expected on nonreactive metal substrates or non-reactive plastic surfaces such as Teflon®, polyethylene or polypropylene. Special surface treatments such as chemical etching or plasma treatment can sometimes provide a reactive surface and promote adhesion to these types of substrates. Dow Corning® brand Primers (see "Primer Selection Guide," page 18) can be used to increase the chemical activity on difficult substrates.

Poor adhesion may be experienced on plastic or rubber substrates that are highly plasticized, because the mobile plasticizers act as release agents. Small-scale laboratory evaluation of all substrates is recommended before production trials are made.

In general, increasing the cure temperature and/or cure time will improve the ultimate adhesion.

SUBSTRATE TESTING

Due to the wide variety of substrate types and differences in substrate surface conditions, general statements on adhesion and bond strength are impossible. To ensure maximum bond strength on a particular substrate, 100 percent cohesive failure of the adhesive in a lap shear or similar adhesive strength test is desired. This ensures compatibility of the adhesive with the substrate being considered. Also, this test can be used to determine minimum cure time or can detect

the presence of surface contaminants such as mold release agents, oils, greases, and oxide films.

USEFUL TEMPERATURE RANGES

For most uses, silicone elastomers should be operational over a temperature range of -45 to 200°C (-49 to 392°F) for long periods of time. However, at both the low- and high-temperature ends of the spectrum, behavior of the materials and performance in particular applications can become more complex and require additional considerations.

For low-temperature performance, thermal cycling to conditions such as -55°C (-67°F) may be possible, but performance should be verified for your parts or assemblies. Factors that may influence performance are configuration and stress sensitivity of components, cooling rates and hold times, and prior temperature history.

At the high-temperature end, the durability of the cured silicone elastomer is time and temperature dependent. As expected, the higher the temperature, the shorter the time the material will remain usable.

COMPATIBILITY

Certain materials, chemicals, curing agents, and plasticizers can inhibit the cure of addition cure adhesives. Most notable of these include:

- Organotin and other organometallic compounds
- · Silicone rubber containing organotin catalyst
- Sulfur, polysulfides, polysulfones, or other sulfurcontaining materials
- · Amines, urethanes, or amine-containing materials
- · Unsaturated hydrocarbon plasticizers
- Some solder flux residues

If a substrate or material is questionable with respect to potentially causing inhibition of cure, it is recommended that a small scale compatibility test be run to ascertain suitability in a given application. The presence of liquid or uncured product at the interface between the questionable substrate and the cured gel indicates incompatibility and inhibition of cure.

MIXING AND DE-AIRING

Upon standing, some filler may settle to the bottom of the liquid containers after several weeks. To ensure a uniform product mix, the material in each container should be thoroughly mixed prior to use.

Two-part materials should be mixed in the proper ratio (1:1 or 10:1) either by weight or volume. The presence of light colored streaks or marbling indicates inadequate mixing.

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One-Part Moisture Cure RTV

Type

Noncorrosive, one or two-part moisture curing RTV silicone elastomers; cure at room temperature without the need for heat

Physical Form

Nonflowing and flowable options; cures to a flexible elastomer

Special Properties

Room temperature cure; opaque and translucent options; resists humidity and other harsh environments; good dielectric properties; good adhesion to a variety of common substrates; low stress, low volatility with some being fast tack-free; two-part materials can also offer rapid cure and green strength at room temperature and deep section cure

Potential Uses

Sealing modules and housings; gasketing; sealing of electronic equipment and modules; part fixing on circuit boards of power supply and CRT, LCD/LED/PDP module assembly; attaching electronic parts

Two-Part Room Temperature Condensation Cure

Type

Two-part RTV silicone elastomers

Physical Form

Nonflowing; cures to a flexible elastomer

Special Properties

Rapid cure and green strength at room temperature; deep section cure; resists humidity and other harsh environments; good dielectric properties; self-priming adhesion; low stress

Potential Uses

Lid and housing seals; gasketing

Heat Cure

Type

One- and two-part silicone elastomers provided in a wide variety of as-applied and as-cured forms

Physical Form

Non-flowing and flowable options; cures to a flexible elastomer; wide variety of cured forms and properties available

Special Properties

Fast thermal cure at lower temperature; resists humidity and other harsh environments; good dielectric properties; self-priming adhesion; low stress, some with less voiding during curing

Potential Uses

Lid and housing seals; seals for ECUs, power modules; fixing electronics parts to circuit boards; reinforcing or fixing parts of connectors; gasketing electronics parts/modules; sealing condensers and electronics components; fixing flyback transformers

PRODUCT INFORMATION

Product	Description	Features	Potential or Typical Uses		
One-Part Moist	ure Cure RTV				
Dow Corning® 3-1944 RTV Coating	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; formulated for broader global compliance; UV indicator for automated inspection; cure system can be heat accelerable for faster in-line processing; medium viscosity providing flow/fill/self-leveling after dispensing process; Mil Spec A-46058 QPL (qualified product listing); UL-94V-0 flammability rating	Good flowability; room temperature cure; no added solvents; UV indicator for inspection; UL 94V-0 and Mil-A-46058	Sealing lids and housings where grooves or other configurations support a flowable material or where limited flow is desired		
Dow Corning® 6-1104 CV Sealant	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure can also be heat accelerated; non-flow after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; low volatility for minimal weight loss under vacuum – proven for spacegrade applications	Non-flowing; room-temperature cure; low levels of volatile condensable materials; high elongation for added stress relief	Space-grade sealing and adhering		
Dow Corning® 6-1125 CV Sealant	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure can also be heat accelerated; non-flow after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; low volatility for minimal weight loss under vacuum – proven for space-grade applications	Non-flowing; room-temperature cure; low levels of volatile condensable materials; high elongation for added stress relief	Space-grade sealing and adhering		
Dow Corning® 738 Electrical Sealant, White	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high elongation for added stress relief	General sealing and component protection		
Dow Corning® 739 Plastic Adhesive – White	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; UL 94V-0 flammability rating; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high elongation for added stress relief; UL 94V-0 flammability rating	Wedge bonding or CRT; parts fixing of power supply module		
Dow Corning® 744 RTV Sealant	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high elongation for added stress relief	Bonding of large components such as batteries or capacitors to circuit boards		
Dow Corning® 838 Silicone Adhesive/ Sealant	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; UL-94HB flammability rating; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high elongation for added stress relief; UL 94HB flammability rating	Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wired and electrical leads; yoke assembly		
Dow Corning® 839 Silicone Adhesive/ Sealant	Translucent blue; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process	Non-flowing; room-temperature cure; general purpose	Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wired and electrical leads; yoke assembly		
Dow Corning® 3140 RTV Coating	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; UV indicator for automated inspection; cure system can be heat accelerable for faster in-line processing; medium viscosity for moderate flow/fill/self-leveling after dispensing process; Mil Spec A-46146 QPL (qualified product listing); UL-94V-1 flammability rating; high elongation value for vibration/mechanical shock dampening and low stress	Good flowability; room temperature cure; no added solvents; UV indicator for inspection; UL 94V-1 and Mil-A-46146	Sealing lids and housings where grooves or other configurations support a flowable material or where limited flow is desired		

Product	Description	Features	Potential or Typical Uses
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Clear	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; Mil Spec A-46146 QPL (qualified product listing); high tensile strength; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high tensile strength and elongation; UV indicator for inspection; Mil-A-46146 tested	Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wired and electrical leads; yoke assembly
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Gray	Gray; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; Mil Spec A-46146 QPL (qualified product listing); high tensile strength; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high tensile strength and elongation; enhanced thermal stability Mil-A-46146 tested	Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wired and electrical leads; yoke assembly
Dow Corning® 3165 Fast Tack RTV Adhesive/ Sealant¹	Gray; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; non-flow after dispensing process; UL-94 V-0 flammability rating	Non-flowing; fast tack-free RT cure; good green strength; UL 94V-0 flammability rating	Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wired and electrical leads; yoke assembly
Dow Corning® EA-3000 White	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; very low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; very low viscosity; controlled silicone volatility; no added solvents	LCD and EL module assembly
Dow Corning® EA-3000 RTV Black²	Black; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; very low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; very low viscosity; controlled silicone volatility; no added solvents	LCD and EL module assembly
Dow Corning® EA-3020 RTV White ^{1,3}	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; very low viscosity for quick flow/fill/self-leveling after dispense; controlled volatility – reducing the potential of volatiles affecting surrounding components; formulated to protect metal electrodes (Al, Cu, Silver, ITO, etc.) from corrosive gasses (SOX, H2S, etc.)	Fast tack-free RT cure; very low viscosity; formulated to protect metal electrodes; controlled silicone volatility; no added solvents	LCD and EL module assembly
Dow Corning® EA-3300 RTV Clear³	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; very low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components; formulated to protect metal electrodes (Al, Cu, Silver, ITO, etc.) from corrosive gasses (SOX, H2S, etc.)	Fast tack-free RT cure; very low viscosity; formulated to protect metal electrodes; controlled silicone volatility; no added solvents	LCD and EL module assembly
Dow Corning® EA-3310 RTV White ^{1,3}	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility-reducing the potential of volatiles affecting surrounding components; formulated to protect metal electrodes (AI, Cu, Silver, ITO, etc.) from corrosive gasses (SOX, H2S, etc.)	Non-flowing; room-temperature cure; formulated to protect metal electrodes; controlled silicone volatility;	Display terminal sealing
Dow Corning® EA-3500 Gray ^{1,2}	Gray; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components; formulated to protect metal electrodes (Al, Cu, Silver, ITO, etc.) from corrosive gasses (SOX, H2S, etc.); UL 94V-0 flammability rating	Fast tack-free RT cure; flowable; formulated to protect metal electrodes; controlled silicone volatility; no added solvents; UL 94V-0 flammability rating	LCD and EL module assembly

¹Not currently available in Europe.
²Not currently available in Americas except in the USA (available in USA).
³Not currently available in the Americas.

Product	Description	Features	Potential or Typical Uses
Dow Corning® EA-9189 RTV White	Black; 2-part (1:1 mix ratio) – fast low-temperature heat cure for faster inline processing; thixotropic – flowable under shear/dispense conditions then non-flow after dispensing process; UV indicator for automated inspection; high tensile stength; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Non-flowing; room-temperature cure	Component fixing, power modules
Dow Corning® SE 738 White	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; cure system can be heat accelerable for faster in-line processing; non-flow after dispensing process; UL-94HB flammability rating; high elongation value for vibration/mechanical shock dampening and low stress	Non-flowing; room-temperature cure; high elongation for added stress relief; UL 94HB flammability rating	Fixing capacitors or coils to circuit boards
Dow Corning® SE 9120 Clear	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; low viscosity; controlled silicone volatility; no added solvents	EL, LCD module assembly; hybrid IC and PCB coating; encapsulation of electrical devices
Dow Corning® SE 9120 S White	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast cure can also be heat accelerated; tack free time for faster in-line processing; low viscosity for quick flow/fill/self-leveling after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; controlled volatility-reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; low viscosity; controlled silicone volatility; no added solvents	EL, LCD module assembly
Dow Corning® SE 9152 HT	Reddish brown; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; high temperature resistant (275°C sustained exposure)	Fast tack-free RT cure; low viscosity; no added solvents; added heat resistance for sustained 275°C exposure	Sealing of sheathed heater terminations
Dow Corning® SE 9168 RTV Gray	Gray; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; non-flow after dispensing process; controlled volatility-reducing the potential of volatiles affecting surrounding components; UL 94V-0 flammability rating	Fast tack-free RT cure; non-flowing; controlled silicone volatility; UL 94V-0 flammability rating	Parts fixing on CRT, circuit boards of power supply modules
Dow Corning® SE 9184 White RTV	White; moderate thermal conductivity; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; non-flow after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components; UL 94V-0 flammability rating	Fast tack-free RT cure; non-flowing; enhanced thermal conductivity; controlled silicone volatility; UL 94V-0 flammability rating	Parts fixing on circuit boards of power supply modules; heat transmission for electronics parts
Dow Corning® SE 9185 Clear	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; non-flow after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; non-flowing; high elongation for added stress relief; controlled silicone volatility	Sealing of electronic equipment and modules; parts fixing on circuit boards
Dow Corning® SE 9186 Clear or White	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; medium viscosity providing flow/fill/self-leveling after dispensing process; high elongation value for vibration/mechanical shock dampening and low stress; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; flowable; controlled silicone volatility; no added solvents	Sealing of electronic equipment and modules; parts fixing on circuit boards

Product	Description	Features	Potential or Typical Uses
Dow Corning® SE 9186 L Clear	Translucent; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components	Fast tack-free RT cure; flowable; controlled silicone volatility; no added solvents	Parts fixing on circuit boards; LCD module assembly
Dow Corning® SE 9187 L Black or L Clear or L White	Black; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; very low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility-reducing the potential of volatiles affecting surrounding components; UL 94HB flammability rating	Fast tack-free RT cure; very low viscosity; controlled silicone volatility; no added solvents; UL 94HB (black only)	LCD module assembly; LED module assembly; potting
Dow Corning® SE 9188 RTV ²	Gray; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; non-flow after dispensing process; controlled volatility – reducing the potential of volatiles affecting surrounding components; UL 94V-0 flammability rating	Fast tack-free RT cure; non-flowing; controlled silicone volatility; UL 94V-0 flammability rating	Parts fixing on CRT, circuit boards of power supply modules
Dow Corning® SE 9189 L Gray or L White RTV	White; 1 part – no mixing required; moisture cure (RTV) – no oven required; solvent-free – no ventilation required; fast tack-free time for faster in-line processing; cure can also be heat accelerated; low viscosity for quick flow/fill/self-leveling after dispensing process; controlled volatility-reducing the potential of volatiles affecting surrounding components; UL 94V-0 flammability rating	Fast tack-free RT cure; flowable; controlled silicone volatility; no added solvents; UL V-0 flammability rating	PDP module assembly; parts fixing on circuit boards
Two-Part Room	Temperature Condensation Cure		
Dow Corning® CY 51-019	White; 2-part (10:1 mix ratio) condensation cure (RTV) – no oven required; solvent-free – no ventilation required; cure can be heat accelerated for faster inline processing; low viscosity for quick flow/fill/self-leveling after dispensing process; no external moisture required to allow deep-section or confined cures	Low viscosity; cures in deep section or in confinement at RT; no added solvents	Solar cell sealing
Dow Corning® Q3-6093 RTV Adhesive Kit	Black; 2-part (10:1 mix ratio) condensation cure (RTV) – no oven required; solvent-free – no ventilation required; faster room temperature cure to reduce inline processing; non-flow after dispensing process; no external moisture required to allow deep-section or confined cures	Non-flowing; cures in deep section or in confinement at RT	Sealing lids and housings; attaching baseplates; gasketing
Dow Corning® SE 9206 L Black ^{1,3}	Black; 2-part (1:1 mix ratio) – condensation cure; low viscosity for quick flow/fill/self-leveling after dispense; cure can be accelerated with elevated temperatures for faster processing; no external moisture required to allow deep-section or confined cures; controlled volatility – reducing the potential of volatiles affecting surrounding components	Flowable; cures in deep section or in confinement at RT; controlled silicone volatility; no added solvents	Electronic board and module sealing and protection
One-Part Heat	Cure		
Dow Corning® 3-1595 Silicone Adhesive¹	Gray; 1 part – no mixing required; heat cure; very high elongation value for vibration/mechanical shock dampening and low stress; UV indicator for automated inspection; thixotropic – flowable under shear/dispense conditions then non-flow after dispensing process	Heat cure; soft, high elongation for added stress relief; flow after dispensing varies with shear conditions; UV indicator for inspection	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting
Dow Corning® 3-1598 HP	Black; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; UV indicator for automated inspection; high tensile strength; low voiding formulation for substrates/applications that are sensitive to voids	Flowable; heat cure; low void formation after cure; for sensitive substrates; high tensile strength; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting

¹Not currently available in Europe.

²Not currently available in Americas except in the USA (available in USA).

³Not currently available in the Americas.

Product	Description	Features	Potential or Typical Uses	
Dow Corning® 3-6265 Thixotropic Adhesive	Black; 1 part – no mixing required; heat cure; thixotropic – flowable under shear/dispense conditions then non-flow after dispensing process; UV indicator for automated inspection	Non-flowing; heat cure; high tensile strength; UV indicator for inspection; non-flowing version of <i>Dow Corning</i> Q3-6611 Adhesive	Sealing lids and housings; attaching baseplates; gasketing; connector sealing	
Dow Corning® 3-6265 HP	Black; 1 part – no mixing required; fast heat cure, reducing inline processing time; non-flow after dispensing process; high tensile strength; low voiding formulation for substrates/applications that are sensitive to voids	Non-flowing; heat cure; low void formation after cure for sensitive substrates; high tensile strength;	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® 3-6876 Black Adhesive	Black; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents; lower viscosity version of <i>Dow Corning</i> Q3-6611 Adhesive	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® 3-6876 Gray Adhesive	Gray; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents; lower viscosity version of <i>Dow Corning</i> Q3-6611 Adhesive	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® 4-8012 Sealant & Adhesive	Gray; 1 part – no mixing required; heat cure; non-flow after dispensing process	Non-flowing; heat cure	Sealing lids and housings; attaching baseplates; gasketing, connector sealing	
Dow Corning® 866 Primerless Silicone Adhesive	Gray; 1 part- no mixing required; heat cure; solvent- free- no ventilation required; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings; attaching baseplates; gasketing, connector sealing	
Dow Corning® EA-2016 Gray Adhesive¹	Gray; 1 part – no mixing required; heat cure; non-flow after dispensing process	Non-flowing; heat cure; high tensile strength	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® Q3-6611 Adhesive, Black	Black; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® Q3-6611 Adhesive, Gray	Gray; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Dow Corning® SE 1713 ¹	Beige; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings for ECUs, power modules; fixing electronics parts to circuit boards; reinforcing of fixing parts of connectors	
Dow Corning® SE 1714¹ or SE 1714 Black²	Beige or Black; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings for ECUs, power modules; fixing electronics parts to circuit boards; reinforcing o fixing parts of connectors	
Dow Corning® SE 1750 White¹	White; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; high tensile strength	Flowable; heat cure; high tensile strength; no added solvents	Sealing lids and housings for ECUs, power modules; fixing electronics parts to circuit boards; reinforcing o fixing parts of connectors	
Dow Corning® SE 1771 ^{1,3}	White; 1 part – no mixing required; fast cure; low temperature heat cure (20 minutes at 110°C); non-flow after dispensing process; high tensile strength	Non-flowing; cures rapidly at moderate heat conditions; high tensile strength	Sealing lids and housings; attaching baseplates; gasketing; connector sealing	
Dow Corning® X3-1598 Adhesive	Black; 1 part – no mixing required; heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; UV indicator for automated inspection	Flowable; heat cure; high tensile strength; UV indicator for inspection; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting	
Two-Part Heat	Cure			
Dow Corning® 96-083 Silicone Adhesive Kit	Translucent; 2-part (10:1 mix ratio); heat cure; low viscosity for quick flow/fill/self-leveling after dispense; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Good flowability; 10:1 mix ratio; heat cure; high tensile strength; no added solvents	Fixing components; bonding to various substrates such as ceramics, plastics, glass, and metals	
Dow Corning® EA-6052 Fast Low- Temperature Cure Adhesive Kit	Black; 2-part (1:1 mix ratio) – fast low temperature heat cure for faster inline processing; medium viscosity providing flow/fill/self-leveling after dispensing process; UV indicator for automated inspection; high tensile strength; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Flowable; 1:1 mix ratio; heat cure; good cure; rate at moderate temperatures; good working time after mixing high tensile strength; UV indicator for inspection; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing	

¹Not currently available in Europe.
²Not currently available in Americas except in the USA (available in USA).
³Not currently available in the Americas.

Product	Description	Features	Potential or Typical Uses
Dow Corning® EA-6054 Thixotropic Fast Low- Temperature Cure Adhesive Kit	Black; 2-part (1:1 mix ratio) – fast low temperature heat cure for faster inline processing; thixotropic – flowable under shear/dipsense conditions then non-flow after dispensing process; UV indicator for automated inspection; high tensile stength; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Thixotropic – flowable after shear/dispense conditions then non-flow; 1:1 mix ratio; heat cure; good cure; rate at moderate temperatures low void formation after cure; for sensitive substrates good working time after mixing high tensile strength; UV indicator for inspection	Sealing lids and housings; attaching baseplates; gasketing; multiple plane dispensing
Dow Corning® Q5-8401 Adhesive Kit	Dark gray; 2-part (1:1 mix ratio) – heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; cure can be accelerated with elevated temperatures for faster processing; two part system enables deep section and confined cures; room temperature storage	Flowable; 1:1 mix ratio; heat cure; high tensile strength; good working time after mixing; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing; engine control; ABS; transmission; lighting
Dow Corning® SE 1700 Clear or White	Translucent; 2-part (10:1 mix ratio); heat cure; non-flow after dispensing process; long working time after 2-part mix – reducing need for equipment purge/clean-up; high tensile strength; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Non-flowing; 10:1 mix ratio; heat cure; high tensile strength; good working time after mixing	Sealing ceramic condensers; sealing electronic components; bonding agent for key pad of PCs
Dow Corning® SE 1701 LTV	White; 2-part (10:1 mix ratio) – heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; long working time after 2-part mix – reducing need for equipment purge/clean-up; high tensile strength; cure can be accelerated with elevated temperatures for faster processing; room temperature storage	Flowable; 10:1 mix ratio; heat cure; high tensile strength; good working time after mixing; no added solvents	Sealing ceramic condensers; sealing electronic components; bonding agent for key pad of PCs
Dow Corning® SE 1720 CV ¹	White; 2-part (1:1 mix ratio) – heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; long working time after 2-part mix – reducing need for equipment purge/clean-up; cure can be accelerated with elevated temperatures for faster processing; two-part system enables deep section and confined cures; controlled volatility-reducing the potential of volatiles affecting surrounding components; room temperature storage	Flowable; 1:1 mix ratio; heat cure; good cure; rate at moderate temperatures good working time after mixing controlled silicone volatility; no added solvents	Sealing lids and housings; attaching baseplates; gasketing, connector sealing
Sylgard® 577 Primerless Silicone Adhesive Kit	Gray; 2-part (10:1 mix ratio) – heat cure; medium viscosity providing flow/fill/self-leveling after dispensing process; long working time – reducing need for equipment purge/clean-up; cure can be accelerated with elevated temperatures for faster processing; two-part system enables deep section and confined cures; MIL-PRF-23586F QPL (qualified product listing); high tensile strength; UL 94V-0 flammability rating; room temperature storage	Flowable; 10:1 mix ratio; heat cure; high tensile strength; long working time after mixing; no added solvents	Sealing lids and housings; attaching baseplates; gasketing; connector sealing

¹Not currently available in Europe.

TYPICAL PROPERTIES – PHYSICAL

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on these products. For regional availability of products refer to the footnotes section of Product Information table.

				. <u>s</u>		To	ensile Streng	th		
Product	One- or Two-Part		Viscosity/Flowability, cP or mPa-sec	Extrusion Rate¹, g/min	Durometer	psi	MPa	kgf/cm²	Elongation, percent	Specific Gravity
One-Part Moisture Cure R	RTV									
Dow Corning® 3-1944 RTV Coating	1	Translucent	65,725	NA	29 A	_	_	_	_	1.03
Dow Corning® 6-1104 CV Sealant	1	Translucent	Nonflow	164	41 A	925	6.4	64	610	1.1
Dow Corning® 6-1125 CV Sealant	1	White	Nonflow	94	43 A	985	6.8	68	680	1.1
Dow Corning® 738 Electrical Sealant, White	1	White	Nonflow	462	34A	380	2.6	26	520	1.04
Dow Corning® 739 Plastic Adhesive – White	1	White	Nonflow	149	24 A	205	1.4	14	500	1.40
Dow Corning® 744 RTV Sealant	1	White	Nonflow	184	37 A	395	2.7	28	590	1.42
Dow Corning® 838 Silicone Adhesive/Sealant	1	White	Nonflow	199	36 A	270	1.9	19	430	1.02
Dow Corning® 839 Silicone Adhesive/Sealant	1	Translucent Blue	Nonflow	179	32 A	285	2.0	20	345	1.02
Dow Corning® 3140 RTV Coating	1	Translucent	35,950	NA	34 A	495	3.0	31	420	1.04
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Clear	1	Translucent	Nonflow	78	47 A	940	6.5	65	680	1.10
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Gray	1	Gray	Nonflow	126	51 A	1,035	7.1	71	670	1.12
Dow Corning® 3165 Fast Tack RTV Adhesive/Sealant	1	Gray	Nonflow	212	_	125	0.9	9	185	1.35
Dow Corning® EA-3000 White	1	White	1,150	NA	18 JIS A	65	0.4	4	150	_
Dow Corning® EA-3000 RTV Black	1	Black	1,150	NA	18 JIS A	65	0.4	4	150	_
Dow Corning® EA-3020 RTV White	1	White	1,100	NA	13 JIS A	50	0.3	3.5	170	1.0
Dow Corning® EA-3300 RTV Clear	1	Translucent	1,094	NA	16 JIS A	65	0.4	4.0	150	1.0
Dow Corning® EA-3310 RTV White	1	White	32,000	NA	19 JIS A	100	0.7	7	352	1.0
Dow Corning® EA-3500 Gray	1	Gray	24,150	NA	21 JIS A	245	1.7	17	225	1.18
Dow Corning® EA-9189 RTV White	1	White	Nonflow	585	63 JIS A	378	2.6	26	50	1.71
Dow Corning® SE 738 White	1	White	Nonflow	_	33 JIS A	90	0.6	6	395	1.05
Dow Corning® SE 9120 Clear	1	Translucent	8,125	NA	24 JIS A	210\5	1.5	15	375	1.03
Dow Corning® SE 9120 S White	1	White	8,250	NA	23 JIS A	220	1.5	15	400	1.03

 $^{^{1}}$ Measured at 90 psi (6.2 bar) through a 1/8" (3.18 mm) orifice.

					Unprime	ed Adhesion L	ap Shear	4	, á
Product	Working Time, RT	RT Tack-Free Time, minutes	Room Temp Cure Time, hr	Heat Cure Time²	psi	N/cm²	kgf/cm²	Linear Coefficient of Thermal Expansion, micron/m °C or ppm	Shelf Life from Date of Manufacture, months
One-Part Moisture Cure R	RTV								
Dow Corning® 3-1944 RTV Coating	NA	16	24	NA	_	_	_	_	12 at <30°C
Dow Corning® 6-1104 CV Sealant	NA	64	72	NA	220	_	15	350	12 at RT
Dow Corning® 6-1125 CV Sealant	NA	65	72	NA	230	_	16	350	12 at RT
Dow Corning® 738 Electrical Sealant, White	NA	82	72	NA	_	_	_	_	8 at RT
Dow Corning® 739 Plastic Adhesive – White	NA	75	723	NA	_	_	_	_	15 at <27°C
Dow Corning® 744 RTV Sealant	NA	55	48	NA	430	295	30	_	6 at <30°C
Dow Corning® 838 Silicone Adhesive/Sealant	NA	46	48	NA	140	95	9.8	375	24 at <32°C
Dow Corning® 839 Silicone Adhesive/Sealant	NA	35	48	NA	140	98	10	300	24 at <32°C
Dow Corning® 3140 RTV Coating	NA	105	72	NA	_	_	_	325	12 at <32°C
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Clear	NA	63	48	NA	1,900	1,285	131	375	12 at <32°C
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/ Sealant – Gray	NA	78	48	NA	1,900	1,285	131	375	12 at <32°C
Dow Corning® 3165 Fast Tack RTV Adhesive/Sealant	NA	5	24	NA	200	140	14.0	250	12 at <32°C
Dow Corning® EA-3000 White	_	8	72	_	_	_	_	_	15 at <32°C
Dow Corning® EA-3000 RTV Black	_	8	72	_	_	_	_	_	15 at <32°C
Dow Corning® EA-3020 RTV White	NA	6	72	NA	_	_	_	_	6 at RT
Dow Corning® EA-3300 RTV Clear	NA	8	72	NA	_	_	_	_	6 at RT
Dow Corning® EA-3310 RTV White	NA	22	72	NA	_	_	_	_	6 at RT
Dow Corning® EA-3500 Gray	NA	10	72	NA	180	120	18	-	18 at <32°C
Dow Corning® EA-9189 RTV White	NA	3	72	NA	264	176	18	_	9 at RT
Dow Corning® SE 738 White	NA	81	72³	NA	940	635	65	_	12 at <32°C
Dow Corning® SE 9120 Clear	NA	9	24	NA	550	370	38	_	18 at <32°C
Dow Corning® SE 9120 S White	NA	9	24	NA	_	_	_	_	15 at <32°C

²Cure times indicate time at the specified temperature and do not include the time required for the adhesive and part assembly to reach that temperature. ³Cure time: 3-mm thickness, 20°C, 55% MRH.

TYPICAL PROPERTIES – PHYSICAL (Continued)

SpecificationWriters: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on these products. For regional availability of products refer to the footnotes section of Product Information table.

				ë		Te	ensile Streng	th		
Product	One- or Two-Part	Color	Viscosity/Flowability, cP or mPa·sec	Extrusion Rate', g/min	Durometer	psi	MPa	kgf/cm²	Elongation, percent	Specific Gravity
Dow Corning® SE 9152 HT	1	Reddish- Brown	10,700	NA	29 JIS A	270	1.9	19	280	1.05
Dow Corning® SE 9168 RTV	1	Gray	Nonflow	23.5	44 JIS A	520	3.6	37	300	1.32
Dow Corning® SE 9184 White RTV	1	White	Nonflow	_	73 JIS A	425	2.9	30	65	2.21
Dow Corning® SE 9185 Clear or White	1	Translucent or White	Nonflow	246	29 JIS A	435	3	30	515	1.05
Dow Corning® SE 9186 Clear or White	1	Translucent or White	66,100	NA	19 JIS A	335	2.3	23	555	1.04
Dow Corning® SE 9186 L Clear	1	Translucent	26,900	NA	24 JIS A	190	1.3	13	310	1.02
Dow Corning® SE 9187 L Black or L Clear or L White	1	Black or Translucent or White	1,150	NA	18 JIS A	65	0.5	5	155	1.00
Dow Corning® SE 9188 RTV	1	Gray	Nonflow	42.5	35 JIS A	390	2.7	27	425	1.29
Dow Corning® SE 9189 L Gray or L White RTV	1	Gray or White	23,300	NA	33 JIS A	320	2.2	22	235	1.18
Two-Part Moisture Cure F	RTV									
Dow Corning® CY 51-019	2	White	11,000	NA	34 A	160	1.1	11	200	1.27
Dow Corning® Q3-6093 RTV Adhesive Kit	2	Black	Nonflow	_	45 A	100	0.7	7	235	1.37
Dow Corning® SE 9206 L Black	2	Black	28,000	NA	28 JIS A	290	2.0	20	185	1.04
One-Part Heat Cure		1			1	1	•	ı	ī	
Dow Corning® 3-1595 Silicone Adhesive	1	Gray	671,000	NA	64 OO	240	1.7	17	800	1.06
Dow Corning® 3-1598 HP	1	Black	92,975	NA	57 A	780	5.4	55	260	1.31
Dow Corning® 3-6265 Thixotropic Adhesive	1	Black	877,600	85	69 A	680	4.7	48	275	1.34
Dow Corning® 3-6265 HP	1	Black	311,100	NA	69 A	815	3.8	38	145	1.33
Dow Corning® 3-6876 Black Adhesive	1	Black	41,275	NA	53 A	795	5.5	55	255	1.31
Dow Corning® 3-6876 Gray Adhesive	1	Gray	39,875	NA	54 A	855	5.9	59	240	1.31
Dow Corning® 4-8012 Sealant & Adhesive	1	Gray	Nonflow	192	32 A	530	3.7	37	360	1.28
Dow Corning® 866 Primerless Silicone Adhesive	1	Gray	49,150	NA	57 A	925	6.4	65	210	1.31

¹Measured at 90 psi (6.2 bar) through a 1/8" (3.18 mm) orifice.

					Unprim	ed Adhesion L	ap Shear		
Product	Working Time, RT	RT Tack-Free Time, minutes	Room Temp Cure Time, hr	Heat Cure Time²	psi	N/cm²	kgf/cm²	Linear Coefficient of Thermal Expansion, micron/m °C or ppm	Shelf Life from Date of Manufacture, months
Dow Corning® SE 9152 HT	NA	16	22	NA	800	540	55	_	12 at <32°C
Dow Corning® SE 9168 RTV	NA	7	48	NA	330	225	23	_	15 at <32°C
Dow Corning® SE 9184 White RTV	NA	3	48	NA	310	205 (GL)	21	_	7 at <25°C
Dow Corning® SE 9185 Clear or White	NA	6	48	NA	230	160	16	_	15 at <32°C
Dow Corning® SE 9186 Clear or White	NA	9	48	NA	200	137 (GL)	14	_	15 at <32°C
Dow Corning® SE 9186 L Clear	NA	8	48	NA	96	66	6.7	_	15 at <32°C
Dow Corning® SE 9187 L Black or L Clear or L White	NA	8	48	NA	40	30 (GL)	3.1	_	12 at <32°C
Dow Corning® SE 9188 RTV	NA	10	48	NA	270	180 (GL)	18	_	15 at <32°C
Dow Corning® SE 9189 L Gray or L White RTV	NA	8	72	NA	200	140 (GL)	14.4	_	15 at <32°C
Two-Part Moisture Cure I	RTV	<u> </u>						·	
Dow Corning® CY 51-019	4 hr	NA	24	NA	120	80 (AL/GL)	8.4	_	12 at <32°C
Dow Corning® Q3-6093 RTV Adhesive Kit	26 min	_	6	NA	270	185	19	285	12 at RT
Dow Corning® SE 9206 L Black	_	19 min	36	NA	213	150	15	_	5 at RT
One-Part Heat Cure									
Dow Corning® 3-1595 Silicone Adhesive	NA	NA	NA	<60 min @ 125°C	200	150	15	_	12 at <5°C
Dow Corning® 3-1598 HP	_	_	_	180 min @ 100°C, 30 min @ 125°C, 15 min @ 150°C	750	500	51	275	6 at <5°C
Dow Corning® 3-6265 Thixotropic Adhesive	NA	NA	NA	60 min @ 125°C, 30 min @ 150°C	600	410	42	270	12 at <5°C
Dow Corning® 3-6265 HP	_	_	_	35 min @ 100°C, 7 min @ 125°C, 5 min @ 150°C	850	530	54	275	12 at <5°C
Dow Corning® 3-6876 Black Adhesive	NA	NA	NA	300 min @ 100°C 150 min @ 125°C 30 min @ 150°C	640	430	44	250	12 at <5°C
Dow Corning® 3-6876 Gray Adhesive	NA	NA	NA	30 min @ 150°C, 60 min @ 125°C	650	440	45	250	12 at <4°C
Dow Corning® 4-8012 Sealant & Adhesive	_	NA	NA	240 min @ 125°C	220	150	15	_	12 at 5°C
Dow Corning® 866 Primerless Silicone Adhesive	NA	NA	NA	60 min @ 150°C	710	490	50	350	12 at <30°C

²Cure times indicate time at the specified temperature and do not include the time required for the adhesive and part assembly to reach that temperature.

TYPICAL PROPERTIES – PHYSICAL (Continued)

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on these products. For regional availability of products refer to the footnotes section of Product Information table.

			\$	ii		Te	ensile Streng	th		Specific Gravity
Product	One- or Two-Part	Color	Viscosity/Flowability, cP or mPa-sec	Extrusion Rate¹, g/min	Durometer	psi	MPa	kgf/cm²	Elongation, percent	
Dow Corning® EA-2016 Gray Adhesive	1	Gray	_	_	45 A	685	4.8	48	280	_
Dow Corning® Q3-6611 Adhesive, Black	1	Black	92,375	NA	60 A	840	5.8	59	235	1.32
Dow Corning® Q3-6611 Adhesive, Gray	1	Gray	87,025	NA	59 A	855	5.9	59	240	1.31
Dow Corning® SE 1713	1	Beige	91,200	NA	61 JIS A	1,080	7.5	76	205	1.27
Dow Corning® SE 1714 or SE 1714 Black	1	Beige or Black	58,800	NA	66 JIS A	1,030	7.1	72	230	1.30
Dow Corning® SE 1750 White ⁵	1	White	76,100	NA	69 JIS A	985	6.8	69	115	1.50
Dow Corning® SE 1771	1	White	670,000	_	74 JIS A	1,015	7	70	100	1.58
Dow Corning® X3-1598 Adhesive	1	Black	86,550	NA	59 A	820	5.7	58	230	1.32
Two-Part Heat Cure										
Dow Corning® 96-083 Silicone Adhesive Kit	2	Translucent	10,600	NA	55 A	840	5.8	59	120	1.08
Dow Corning® EA-6052 Fast Low-Temperature Cure Adhesive Kit	2	Black	40,600	NA	48 A	685	4.7	47	170	1.24
Dow Corning® EA-6054 Thixotropic Fast Low-Temperature Cure Adhesive Kit	2	Black	1,016,000	NA	61 A	835	5.8	58	205	1.30
Dow Corning® Q5-8401 Adhesive Kit	2	Dark Gray	77,425	NA	61 A	875	6.0	61	210	1.31
Dow Corning® SE 1700 Clear or White	2	Translucent	610,000	_	46 JIS A	1,000	6.9	70	420	_
Dow Corning® SE 1701 LTV5	2	White	191,000	NA	67 JIS A	1,025	7.1	72	200	1.29
Dow Corning® SE 1720 CV	2	White	89,700	NA	33 JIS A	480	3.3	34	360	1.06
Sylgard® 577 Primerless Silicone Adhesive Kit	2	Gray	112,500	NA	63 A	940	6.5	65	200	1.29

¹Measured at 90 psi (6.2 bar) through a 1/8" (3.18 mm) orifice.

					Unprim	ed Adhesion L	ap Shear		45
Product	Working Time, RT	RT Tack-Free Time, minutes	Room Temp Cure Time, hr	Heat Cure Time²	psi	N/cm²	kgf/cm²	Linear Coefficient of Thermal Expansion, micron/m °C or ppm	Shelf Life from Date of Manufacture, months
Dow Corning® EA-2016 Gray Adhesive	6 hrs	NA	NA	30 min @ 150°C	750	520	52	225	15 at 5°C
Dow Corning® Q3-6611 Adhesive, Black	NA	NA	NA	180 min @ 100°C 60 min @ 125°C 30 min @ 150°C	850	580	59	250	12 at <4°C
Dow Corning® Q3-6611 Adhesive, Gray	NA	NA	NA	30 min @ 150°C, 60 min @ 125°C	880	600	61	250	12 at <4°C
Dow Corning® SE 1713	NA	NA	NA	30 min @ 150°C	790	540	55	_	8 at <10°C
Dow Corning® SE 1714 or SE 1714 Black	NA	NA	NA	30 min @ 150°C	790	540	55	_	9 at <5°C
Dow Corning® SE 1750 White	NA	NA	NA	30 min @ 150°C	590	400	41	_	8 at <10°C
Dow Corning® SE 1771	_	NA	NA	20 min @ 110°C	440	310	31	_	12 at <10°C
Dow Corning® X3-1598 Adhesive	NA	NA	NA	30 min @ 150°C, 60 min @ 125°C	840	570	58	_	12 at <5°C
Two-Part Heat Cure									
Dow Corning® 96-083 Silicone Adhesive Kit	_	NA	NA	30 min @ 150°C	850	580	59	_	12 at <32°C
Dow Corning® EA-6052 Fast Low-Temperature Cure Adhesive Kit	5 hrs	NA	NA	60 min @ 90°C, 30 min @ 125°C, 10 min @ 150°C	710	480	49	300	12 at <25°C
Dow Corning® EA-6054 Thixotropic Fast Low-Temperature Cure Adhesive Kit	115 min	NA	NA	60 min @ 90°C, 30 min @ 125°C, 10 min @ 150°C	770	520	53	250	12 at <25°C
Dow Corning® Q5-8401 Adhesive Kit	24 hrs	NA	NA	90 min @ 120°C	830	570	58	_	12 at <50°C
Dow Corning® SE 1700 Clear	8 hr	NA	NA	30 min @ 150°C	420	290 (AL)	29.5	_	18 at <30°C
Dow Corning® SE 1701 LTV	6 hr	NA	NA	30 min @ 150°C	820	570 (AL)	57.9	_	12 at <30°C
Dow Corning® SE 1720 CV	6 hr	NA	NA	50 min @ 70°C 30 min @ 80°C 10 min@ 100°C	240	155	16	_	9 at <32°C
Sylgard® 577 Primerless Silicone Adhesive Kit	22 hr	NA	NA	60 min @ 125°C	960	650	66	300	12 at <32°C

²Cure times indicate time at the specified temperature and do not include the time required for the adhesive and part assembly to reach that temperature.

TYPICAL PROPERTIES – ELECTRICAL

SpecificationWriters: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on these products. For regional availability of products refer to the footnotes section of Product Information table.

	Dielectric Strength		Dielectric Constant			Dissipation Factor			ty,	
Dow Corning® Brand Product	volts/mil	kV/mm	At 100 Hz	At 100 kHz	At 1MHz	At 100 Hz	At 100 kHz	At 1MHz	Volume Resistivity, ohm-cm	Agency Listing
One-Part Moisture Cure RTV										
Dow Corning® 3-1944 RTV Coating	425	17	2.67	2.73	_	0.0013	<0.0002	_	1.3E+15	UL 94V-0/ MIL-A-46058
Dow Corning® 6-1104 CV Sealant	550	21	2.59	2.58	_	0.00035	< 0.00017	_	1.37E+15	NA
Dow Corning® 6-1125 CV Sealant	550	22	2.62	2.61	_	0.00155	< 0.00017	_	1.27+15	NA
Dow Corning® 738 Electrical Sealant, White	_	_	_	_	_	_	_	_	_	94НВ
Dow Corning® 739 Plastic Adhesive – White	625	25	_	_	3.5	_	_	4.00E-03	2.0E+15	NA
Dow Corning® 744 RTV Sealant	400	16	4.41	4.31	4.25	0.0006	0.0032	0.0032	1.1E+15	NA
Dow Corning® 838 Silicone Adhesive/Sealant	500	19	2.64	2.63	_	0.0006	<0.0002	_	2.2E+15	UL 94HB
Dow Corning® 839 Silicone Adhesive/Sealant	480	19	2.51	2.49	_	0.0009	<0.0002	_	2.5E+14	NA
Dow Corning® 3140 RTV Coating	450	18	2.52	2.52	_	0.004	0.0010	_	2.1E+14	UL 94V-1/ MIL-A-46146
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/Sealant – Clear	500	20	2.83	2.83	_	0.0005	<0.0002	_	4.4E+14	MIL-A-46146
Dow Corning® 3145 RTV MIL-A-46146 Adhesive/Sealant – Gray	500	20	2.83	2.83	_	0.0005	<0.0002	_	4.4E+14	MIL-A-46146
Dow Corning® 3165 Fast Tack RTV Adhesive/Sealant	500	20	2.22	2.38	_	0.003	<0.0002	_	2.4E+15	UL 94V-0
Dow Corning® EA-3000 White	475	19	_	_	2.8	_	_	9.00E-04	1.0E+15	NA
Dow Corning® EA-3000 RTV Black	474	19	_	_	2.8	_	_	9.00E-04	1.0E+15	NA
Dow Corning® EA-3020 RTV White	700	28	_	_	2.8	_	_	3.7E-3	3.6E+16	NA
Dow Corning® EA-3300 RTV Clear	650	26	_	_	2.8	_	_	3.4E-3	2.5E+15	NA
Dow Corning® EA-3310 RTV White	609	24	_	_	3.0	_	_	5.8E-4	5.0E+15	NA
Dow Corning® EA-3500 Gray	634	25	_	_	3.1	_	_	4.0E-3	9.0E+14	UL 94V-0
Dow Corning® EA-9189 RTV White	652	25.7	3.2	2.7	_	0.08	0.1	_	8.33E+16	UL 94-V0
Dow Corning® SE 738 White	500	20	_	_	2.8	_	_	7.00E-5	3.0E+15	UL 94HB
Dow Corning® SE 9120 Clear	575	23	_	_	2.7	_	_	4.00E-04	7.0E+15	NA
Dow Corning® SE 9120 S White	575	23		_	2.7	_	_	4.00E-04	7.0E+15	NA
Dow Corning® SE 9152 HT	625	25			2.6		_	1.00E-03	3.0E+16	NA
Dow Corning® SE 9168 RTV	650	26			3.2	_	_	2.00E-03	8.0E+15	UL 94V-0
Dow Corning® SE 9184 White RTV	500	20	_	_	3.9	_	_	2.00E-03	1.5E+15	UL 94V-0
Dow Corning® SE 9185 Clear or White	550	22	_	_	2.8	_	_	7.00E-04	2.0E+16	NA
Dow Corning® SE 9186 Clear or White	575	23	_	_	2.8	_	_	9.00E-04	2.0E+16	NA
Dow Corning® SE 9186 L Clear	575	23	_	_	2.7	_	_	1.30E-03	6.0E+15	NA
Dow Corning® SE 9187 L Black or L Clear or L White	500	20	_	_	2.8	_	_	9.00E-04	3.0E+15	UL 94HB – black only
Dow Corning® SE 9188 RTV	750	30	_	_	3.4	_	_	3.00E-04	1.0E+15	UL 94V-0
Dow Corning® SE 9189 L Gray or L White RTV	625	25	_	_	3.1	_	_	4.00E-04	9.0E+14	UL 94V-0

TYPICAL PROPERTIES – ELECTRICAL (Continued)

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product. For regional availability of products refer to the footnotes section of Product Information table.

	Dielectric Strength		Dielectric Constant			Dissipation Factor			ty,	
Dow Corning® Brand Product	volts/mil	kV/mm	At 100 Hz	At 100 kHz	At 1MHz	At 100 Hz	At 100 kHz	At 1MHz	Volume Resistivity, ohm-cm	Agency Listing
Two-Part Room Temperature Cond	lensation	Cure								
Dow Corning® CY 51-019	500	20	_	_	3.1	_	_	4.00E-03	4.0E+12	NA
Dow Corning® Q3-6093 RTV Adhesive - Kit	500	20	3.38	3.26	_	0.009	0.0026	_	7.3E+14	NA
Dow Corning® SE 9206 L Black	609	24	_	_	2.7	_	_	2.00E-3	1.5E+16	NA
One-Part Heat Cure										
Dow Corning® 3-1595 Silicone Adhesive	_	_	_	_	_	_	_	_	_	NA
Dow Corning® 3-1598 HP	500	20	3.09	3.03	_	0.006	0.0003	_	5.4E+14	NA
Dow Corning® 3-6265 Thixotropic Adhesive	525	21	2.94	2.89	_	0.009	0.0010	_	4.7E+14	NA
Dow Corning® 3-6265 HP	600	24	3.14	3.09	_	0.005	0.0019	_	9.2E+14	NA
Dow Corning® 3-6876 Black Adhesive	525	21	2.81	2.78	_	0.008	0.0010	_	1.0E+14	NA
Dow Corning® 3-6876 Gray Adhesive	525	21	2.81	2.78	_	0.008	0.0010	_	1.0E+14	NA
Dow Corning® 4-8012 Sealant & Adhesive	_	_	_	_	_	_	_	_	_	_
Dow Corning® 866 Primerless Silicone Adhesive	500	20	_	_	_	_	_	_	2.0E+15	NA
Dow Corning® EA-2016 Gray Adhesive	_	_	_	_	_	_	_	_	_	_
Dow Corning® Q3-6611 Adhesive, Black	350	14	3.09	3.02	_	0.012	0.0038	_	1.6E+14	NA
Dow Corning® Q3-6611 Adhesive, Gray	350	14	3.02	2.95	_	0.012	0.0031	_	1.6E+14	NA
Dow Corning® SE 1713	725	29	_	_	3	_	_	3.00E-03	8.7E+15	NA
Dow Corning® SE 1714 or SE 1714 Black	750	30	_	_	3.1	_	_	2.80E-03	5.0E+15	NA
Dow Corning® SE 1750 White	725	29	_	_	3.2	_	_	2.00E-03	9.0E+14	NA
Dow Corning® SE 1771	_	_	_	_	_	_	_	_	_	_
Dow Corning® X3-1598 Adhesive		_	_	_	_		_	_	_	NA
Two-Part Heat Cure										
Dow Corning® 96-083 Silicone Adhesive Kit	450	18	_	_	_	_	_	_	1.7E+15	NA
Dow Corning® EA-6052 Fast Low- Temperature Cure Adhesive Kit	575	23	3.08	3.01	_	0.002	<0.0002	_	5.3E+14	NA
Dow Corning® EA-6054 Thixotropic Fast Low-Temperature Cure Adhesive Kit	550	22	3.08	3.02	_	0.002	<0.0002	_	2.8E+14	NA
Dow Corning® Q5-8401 Adhesive Kit	350	14	_	_	_	_	_	_	8.8E+14	NA
Dow Corning® SE 1700 Clear or White	550	22	_	_	3	_	_	1.00E-03	5.0E+14	NA
Dow Corning® SE 1701 LTV	725	29	_	_	3	_	_	3.00E-03	1.0E+15	NA
Dow Corning® SE 1720 CV	650	26	_	_	2.7	_	_	2.00E-03	3.0E+16	NA
Sylgard® 577 Primerless Silicone Adhesive Kit	500	20	2.83	2.78	_	0.006	0.0004	_	1.3E+15	UL 94V-0/ MIL-PRF-23586F

Automated airless dispense equipment can be used to reduce or avoid the need to de-air. If de-airing is required to reduce voids in the cured elastomer, consider a vacuum de-air schedule of >28 inches Hg for 10 minutes or until excessive bubbling subsides.

REVERSION

When two-part condensation curing materials with organotin catalysts, such as *Dow Corning*® Q3-6093 RTV Adhesive, are cured in confinement (especially in deep section) and are later subjected to high heat conditions, they can potentially revert from a cured elastomer to a flowable polymer. Although this condition is unusual, parts using two-part condensation cure adhesives should be thoroughly tested in accelerated temperature conditions for this potential limitation.

SOLVENT EXPOSURE

The silicone adhesives discussed in this brochure are intended only to survive splash or intermittent exposures to

liquid or vapor solvent or fuel that may occur in an application. These adhesives are not suitable for continuous solvent or fuel exposure; however, *Dow Corning*® 4-8012 Sealant & Adhesive is specially formulated for improved resistance. Testing should be done to confirm performance of the adhesives under these conditions.

STORAGE AND SHELF LIFE

Shelf life is indicated by the "Use Before" date found on the product label.

For best results, *Dow Corning* RTV adhesives should be stored at or below 25°C (77°F). Special precautions must be taken to prevent moisture from contacting these materials. Containers should be kept tightly closed with head or air space minimized. Partially filled containers should be purged with dry air or other gases, such as nitrogen.

Dow Corning heat-cure adhesives should also be stored at or below 25°C (77°C). Containers should be kept tightly closed and kept in cold storage at all times to extend shelf life.

PRIMER SELECTION GUIDE

Detailed information is available in the Primers data sheet, form number 10-909, available from the Dow Corning website (www.dowcorning.com/electronics) or from Dow Corning Customer Service. Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on these products.

Dow Corning® brand Primer or Adhesion Promoter	Special Properties	Substrates	Compatible Silicones
Dow Corning® P5200 Adhesion Promoter - Clear	The most versatile of all Dow Corning primers for the widest range of silicones and electronics applications. This clear primer is similar to <i>Dow Corning</i> ® 1200 OS Primer but uses a slightly different adhesion promoter combination. It enhances the adhesion of many RTV and heat-cure silicones to a wide variety of surfaces. Not registered for use in European Union.	Wide variety of surfaces including FR-4, ceramics, and many metals and plastics	All
Dow Corning® 1200 OS Primer Clear	The most versatile of all Dow Corning primers for the widest range of silicone types and electronics applications. This clear primer is supplied in a low-VOC diluent for lower environmental impact and exhibits low odor for convenient handling. It enhances the adhesion of many RTV and heat-cure silicones to a variety of surfaces. This primer is very similar to <i>Dow Corning</i> P5200 Adhesion Promoter and is also registered for use in the European Union.	Wide variety of surfaces including FR-4, ceramics, and many metals and plastics	All
Dow Corning® P5204 Adhesion Promoter ¹	This clear primer is supplied in a low-VOC diluent for lower environmental impact and exhibits low odor for convenient use. It is specially formulated to enhance adhesion of many moisture-cure RTV silicones to a wide variety of surfaces.	Wide variety of surfaces including FR-4, ceramics, and metals. Not recom- mended for plastics	All one-part alcohol cure and two-part condensation cure except <i>Dow Corning®</i> 93-076
Dow Corning® 1201 RTV Prime Coat	This transparent primer with yellow tint is supplied in a mixture of acetone and toluene solvents. It is specifically formulated to enhance the adhesion of <i>Dow Corning</i> ® 3110 RTV and 3120 RTV silicones to a wide variety of surfaces, especially FR-4 and metals.	Wide variety of surfaces, especially FR-4 and metals	Dow Corning® 3110, 3112, 3120
Dow Corning® 1205 Prime Coat	Specially formulated to increase adhesion of a wide range of silicones to plastics including more difficult types such as acrylic and polycarbonate. This clear primer is supplied in a mixture of organic solvents.	Most plastics, ceramics, and composites	Not recommended for use with addition-cure silicones such as <i>Dow Corning®</i> 170, 184, 186, etc.
Dow Corning® 92-023 Primer	Specially formulated for use with addition-cure silicones to mitigate surface cure poisoning. This clear primer is diluted in heptane solvent and enhances the adhesion of many addition-cure silicones to a wide variety of surfaces.	FR-4, most metals and ceramics	Non-pigmented two-part addition-cure silicones

¹Dow Corning® P5204 Adhesion Promoter not available in Europe.

PACKAGING

In general, *Dow Corning* adhesives/sealants are supplied in nominal 0.45-, 3.6-, 18- and 200-kg (1-, 8-, 40- and 440-lb) containers, net weight. Not all products may be available in all packages and some additional packages, such as bladder packs or tubes, may be available for certain coatings and package sizes.

LIMITATIONS

These products are neither tested nor represented as suitable for medical or pharmaceutical uses.

SAFE HANDLING INFORMATION

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET IS AVAILABLE ON THE DOW CORNING WEBSITE AT WWW.DOWCORNING.COM, OR FROM YOUR DOW CORNING REPRESENTATIVE, OR DISTRIBUTOR, OR BY CALLING YOUR GLOBAL DOW CORNING CONNECTION.

HEALTH AND ENVIRONMENTAL INFORMATION

To support customers in their product safety needs, Dow Corning has an extensive Product Stewardship organization and a team of Product Safety and Regulatory Compliance (PS&RC) specialists available in each area. For further information, please see our website, www. dowcorning.com, or consult your local Dow Corning representative.

LIMITED WARRANTY INFORMATION – PLEASE READ CAREFULLY

The information contained herein is offered in good faith and is believed to be accurate. However, because conditions and methods of use of our products are beyond our control, this information should not be used in substitution for customer's tests to ensure that Dow Corning's products are safe, effective, and fully satisfactory for the intended end use. Suggestions of use shall not be taken as inducements to infringe any patent.

Dow Corning's sole warranty is that the product will meet the Dow Corning sales specifications in effect at the time of shipment. Your exclusive remedy for breach of such warranty is limited to refund of purchase price or replacement of any product shown to be other than as warranted.

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