

Information about *Dow Corning*[®] brand Adhesive/Sealants

Silicones and Electronics

Long-term, reliable protection of sensitive circuits and components is important in many of today's delicate and demanding electronic applications. Silicones function as durable dielectric insulation, as barriers against environmental contaminants and as stress-relieving shock and vibration absorbers over a wide temperature and humidity range.

In addition to sustaining their physical and electrical properties over a broad range of operating conditions, silicones are resistant to ozone and ultraviolet degradation, have good chemical stability and are available in a variety of useful forms as conformal coatings, encapsulants and adhesives. Dow Corning's broad range of general purpose and specialty products offers you a choice of materials for your application needs.

Dow Corning offers a variety of noncorrosive silicone products for electronic sealing, bonding and adhering applications. These adhesives generally fall into three cure types. The first group are moisture cure, generally meant for room-temperature processing. The second type (condensation cure) offers rapid room-temperature and deep-section curing. The third type is heat cure for rapid processing. All convert to durable, relatively low stress elastomers. Most will develop good, primerless adhesion to a variety of common substrates including ceramics, reactive metals and filled plastics.

CURE CONDITIONS

One-Part Moisture Cure RTV

The one-part moisture cure adhesives (838, 839, 3165, 3145, 3140 and 3-1744) are generally cured at room temperature and in a range of 30 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. Materials and parts can be handled in much shorter times of about 10 to 120 minutes depending on the product chosen and the amount of material used per part. 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. Working time is generally a few minutes to an

| One-Part Moisture Cure RTV |
|--|
| <p>Type Noncorrosive, one-part moisture curing RTV silicone elastomers</p> <p>Physical Form Nonflowing and flowable options; cures to flexible elastomer</p> <p>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</p> <p>Potential Uses Sealing modules and housings; gasketing</p> |
| Two-Part Room Temperature Condensation Cure |
| <p>Type Two-part RTV silicone elastomers</p> <p>Physical Form Nonflowing; cures to flexible elastomer</p> <p>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</p> <p>Potential Uses Lid and housing seals; gasketing</p> |
| Heat Cure |
| <p>Type One- and two-part silicone elastomers</p> <p>Physical Form Nonflowing and flowable options; cures to flexible elastomer</p> <p>Special Properties Fast thermal cure; resists humidity and other harsh environments; good dielectric properties; self-priming adhesion; low stress</p> <p>Potential Uses Lid and housing seals; gasketing</p> |

PRODUCT INFORMATION

| Dow Corning® brand Product | Description | Features |
|--|---|--|
| One-Part Moisture Cure RTV | | |
| 838 and 839 Silicone Adhesive/Sealants | Nonflowing; good strength; general purpose; 838 is white; 839 is translucent blue | One-part; noncorrosive silicone; room temperature cure requires moisture |
| 3165 Fast Tack RTV Adhesive/Sealant | Nonflowing; fast tack-free cure with good green strength; good room temperature adhesion to most substrates | One-part; noncorrosive silicone; room temperature cure requires moisture |
| 3145 Silicone Adhesive | Nonflowing; translucent or gray versions; high tensile, elongation, peel and lap shear values; useful for Mil Spec applications; 3145 Clear contains UV indicator for automated inspection; 3145 Gray particularly good for high temperature applications | One-part; noncorrosive silicone; room temperature cure requires moisture |
| 3140 RTV Coating | Flowable; translucent; good cured strength; contains UV indicator for automated inspection | One-part; noncorrosive silicone; room temperature cure requires moisture |
| 3-1744 Conformal Coating | Flowable; translucent; fast tack over and cure; contains UV indicator for automated inspection | One-part; noncorrosive silicone; room temperature cure requires moisture |
| Two-Part Room Temperature Condensation Cure | | |
| Q3-6093 Silicone Adhesive | Rapid room temperature and deep section cure; good green strength; nonflow; self-priming adhesion; good room temperature adhesion to most substrates | Two-part; 10:1 mix; noncorrosive |
| Heat Cure | | |
| 577 Primerless Silicone Adhesive | Rapid heat cure; good flow; self-priming adhesion; gray | Two-part; 10:1 mix; noncorrosive |
| 3-6876 Primerless Silicone Adhesive | Rapid heat cure; good flow; self-priming adhesion; gray or black | One-part; noncorrosive |
| 3-6611 Primerless Silicone Adhesive | Rapid heat cure; moderate flow; self-priming adhesion; gray or black | One-part; noncorrosive |
| 3-6265 Primerless Silicone Adhesive | Rapid heat cure; nonflow; self-priming adhesion; black; contains UV indicator for automated inspection | One-part; noncorrosive |
| EA-6052 Fast Low-Temp Cure Adhesive | Rapid low-temperature cure; flowable to allow channel filling; contains UV indicator for automated inspection | Two-part; 1:1 mix; noncorrosive |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | Rapid low-temperature cure; non-slump; contains UV indicator for automated inspection | Two-part; 1:1 mix; noncorrosive |

| Dow Corning® brand Product | Potential Uses | Application Methods |
|--|---|--|
| One-Part Moisture Cure RTV | | |
| 838 and 839 Silicone Adhesive/Sealants | Sealing openings in modules and housings; adding mechanical stability to individual components; assembly of components on PWBs; sealing in and around wires and electrical leads; yoke assembly | Manual or automated extrusion from cartridge |
| 3165 Fast Tack RTV Adhesive/Sealant | | |
| 3145 Silicone Adhesive | | |
| 3140 RTV Coating | Sealing lids and housings where grooves or other configurations support a flowable material or where limited flow is desired. | Manual or automated extrusion from cartridge or bulk container |
| 3-1744 Conformal Coating | | |
| Two-Part Room Temperature Condensation Cure | | |
| Q3-6093 Silicone Adhesive | Sealing lids and housings; attaching baseplates; gasketing | Automated, two-part airless mix equipment |
| Heat Cure | | |
| 577 Primerless Silicone Adhesive | Sealing lids and housings; attaching baseplates; gasketing; connector sealing | Automated, two-part airless mix equipment; hand mix and de-air |
| 3-6876 Primerless Silicone Adhesive | | Automated dispense through syringe needle from pressure pot reservoir; hand extrusion from cartridge |
| 3-6611 Primerless Silicone Adhesive | | |
| 3-6265 Primerless Silicone Adhesive | | |
| EA-6052 Fast Low-Temp Cure Adhesive | | Automated, two-part airless mix equipment; hand mix and de-air |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | Sealing lids and housings; attaching baseplates; gasketing; multiple plane dispensing | |

TYPICAL PROPERTIES

Specification Writers: Please contact your local Dow Corning sales office or your Global Dow Corning Connection before writing specifications on this product.

| Dow Corning® brand Product | One or Two Part | Color | Viscosity/Flowability, centipoise or mPas | Extrusion Rate, g/min | Durometer | Tensile Strength | | | Elongation, percent | Specific Gravity, uncured | Working Time at RT ¹ | Tack Free Time at RT, minutes | Cure Time at RT, hours | Unprimed Adhesion, Lap Shear | | |
|--|-----------------|---------------------|--|-----------------------|-----------|------------------|-----|---------------------|---------------------|---------------------------|---------------------------------|----------------------------------|------------------------|---------------------------------|-----|---------------------|
| | | | | | | psi | MPa | kgf/cm ² | | | | | | psi | MPa | kgf/cm ² |
| One-Part Moisture Cure RTV | | | | | | | | | | | | | | | | |
| 838 Silicone Adhesive/Sealant | 1 | White | Non-flow | 220 | 28 A | 230 | 1.6 | 16.2 | 430 | 1.02 | – | 45 | 48 | 140 | 1.0 | 9.8 |
| 839 Silicone Adhesive/Sealant | 1 | Translucent Blue | Non-flow | 220 | 28 A | 250 | 1.7 | 17.6 | 350 | 1.02 | – | 35 | 48 | 140 | 1.0 | 9.8 |
| 3165 Fast Tack RTV Adhesive/Sealant | 1 | Gray | Non-flow | 200 | 35 A | 170 | 1.2 | 11.9 | 185 | 1.28 | – | 4 | 24 | 200 | 1.4 | 14.1 |
| 3145 Silicone Adhesive | 1 | Gray or translucent | Non-flow | 125 | 50 A | 1000 | 6.9 | 70.3 | 660 | 1.12 | – | 70 | 48 | – | – | – |
| 3140 RTV Coating | 1 | Translucent | 30,000 | NA | 32 A | 450 | 3.1 | 31.6 | 425 | 1.03 | – | 70 | 72 | – | – | – |
| 3-1744 Conformal Coating | 1 | Translucent | 60,000 | NA | 35 A | – | – | – | – | 1.04 | – | 15 | 24 | 175 | 1.2 | 12.3 |
| Two-Part Room Temperature Condensation Cure | | | | | | | | | | | | | | | | |
| Q3-6093 Silicone Adhesive | 2 | Black | Non-flow | – | 45 A | 250 | 1.7 | 17.6 | 225 | 1.37 | <20 min. | – | 90 min. | 230 | 1.6 | 16.2 |
| Heat Cure | | | | | | | | | | | | | | | | |
| 577 Primerless Silicone Adhesive | 2 | Gray | 66,000 | – | 63 A | 950 | 6.5 | 66.8 | 200 | 1.30 | >12 hr. | NA | NA | 875 | 6.0 | 61.5 |
| 3-6876 Primerless Silicone Adhesive | 1 | Gray or black | 36,000 | – | 52 A | 800 | 5.5 | 56.2 | 265 | 1.31 | NA | NA | NA | 625 | 4.3 | 43.9 |
| 3-6611 Primerless Silicone Adhesive | 1 | Gray or black | 85,000 | – | 60 A | 850 | 5.9 | 59.8 | 240 | 1.31 | NA | NA | NA | 790 | 5.4 | 55.5 |
| 3-6265 Primerless Silicone Adhesive | 1 | Black | Non-flow | – | 68 A | – | – | – | – | 1.34 | NA | NA | NA | 550 | 3.8 | 38.7 |
| EA-6052 Fast Low-Temp Cure Adhesive | 2 | Black | 41,000/51,000 | – | 56 A | 769 | 5.3 | 54.1 | 150 | 1.25 | 304 min. | NA | NA | 728 | 5.0 | 51.2 |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | 2 | Black | Non-flow | – | 63 A | 797 | 5.4 | 56.0 | 170 | 1.29 | 115 min. | NA | NA | 777 | 5.4 | 54.6 |

¹Time to double initial mixed viscosity.

| <i>Dow Corning</i> [®] brand Product | Unprimed Adhesion, Peel Strength | | | Thermal Conductivity | | Linear Coefficient of Thermal Expansion, micron/m °C or ppm | Shelf Life from Date of Manufacture, months | Dielectric Strength | | Dielectric Constant at 100 Hz | Dielectric Constant at 100 kHz | Dissipation Factor at 100 Hz | Dissipation Factor at 100 kHz | Volume Resistivity, ohm-cm |
|--|----------------------------------|------|--------|----------------------|------------------------|---|---|---------------------|-------|-------------------------------|--------------------------------|------------------------------|-------------------------------|----------------------------|
| | ppi | kN/m | kgf/cm | Watt/meter-°K | cal/cm-sec-°C | | | volts/mil | kV/mm | | | | | |
| One-Part Moisture Cure RTV | | | | | | | | | | | | | | |
| 838 Silicone Adhesive/Sealant | 30 | 5.3 | 5.4 | 0.18 | 4.3 x 10 ⁻⁴ | 380 | 24 at <32°C | 490 | 19.3 | 2.64 | 2.63 | <0.001 | <0.001 | 2.2 x 10 ¹⁵ |
| 839 Silicone Adhesive/Sealant | 30 | 5.3 | 5.4 | 0.18 | 4.3 x 10 ⁻⁴ | 300 | 24 at <32°C | 480 | 18.9 | 2.51 | 2.49 | <0.001 | <0.001 | 2.5 x 10 ¹⁴ |
| 3165 Fast Tack RTV Adhesive/Sealant | - | - | - | - | - | 250 | 12 at <32°C | 505 | 19.9 | 2.22 | 2.38 | 0.003 | <0.001 | 2.4 x 10 ¹⁵ |
| 3145 Silicone Adhesive | 75 | 13.2 | 13.4 | 0.18 | 4.3 x 10 ⁻⁴ | 350 | 12 at <32°C | 510 | 20.1 | 2.83 | 2.83 | <0.001 | <0.001 | 4.4 x 10 ¹⁴ |
| 3140 RTV Coating | 33.5 | 5.9 | 6.0 | 0.18 | 4.3 x 10 ⁻⁴ | 315 | 12 at <32°C | 445 | 17.5 | 2.52 | 2.52 | 0.004 | 0.001 | 2.1 x 10 ¹⁴ |
| 3-1744 Conformal Coating | - | - | - | 0.18 | 4.3 x 10 ⁻⁴ | 360 | 12 at RT | 590 | 23.2 | 2.32 | 2.29 | 0.001 | <0.001 | 2.5 x 10 ¹⁵ |
| Two-Part Room Temperature Condensation Cure | | | | | | | | | | | | | | |
| Q3-6093 Silicone Adhesive | 10 | 1.8 | 1.8 | 0.31 | 7.4 x 10 ⁻⁴ | 285 | 12 at RT | 510 | 20.1 | 3.38 | 3.28 | 0.0095 | <0.002 | 7.3 x 10 ¹⁴ |
| Heat Cure | | | | | | | | | | | | | | |
| 577 Primerless Silicone Adhesive | - | - | - | - | - | 300 | 12 at <32°C | 490 | 19.3 | 2.83 | 2.78 | 0.0065 | <0.001 | 1.3 x 10 ¹⁵ |
| 3-6876 Primerless Silicone Adhesive | - | - | - | 0.32 | 7.6 x 10 ⁻⁴ | - | 12 at <4°C | 530 | 20.9 | 2.81 | 2.78 | 0.008 | <0.001 | 1.0 x 10 ¹⁴ |
| 3-6611 Primerless Silicone Adhesive | - | - | - | 0.32 | 7.6 x 10 ⁻⁴ | 260 | 12 at <4°C | 350 | 13.8 | 3.05 | 2.98 | 0.012 | 0.0038 | 1.6 x 10 ¹⁴ |
| 3-6265 Primerless Silicone Adhesive | - | - | - | 0.35 | 8.4 x 10 ⁻⁴ | 270 | 12 at <4°C | 535 | 21.1 | 2.94 | 2.89 | 0.009 | <0.001 | 4.7 x 10 ¹⁴ |
| EA-6052 Fast Low-Temp Cure Adhesive | - | - | - | - | - | 290 | 6 at 25°C | 577 | 22.7 | 3.06 | 3.01 | 0.002 | <0.0002 | 5.3 x 10 ¹⁴ |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | - | - | - | - | - | 256 | 6 at 25°C | 555 | 21.8 | 3.08 | 3.02 | 0.002 | <0.002 | 2.8 x 10 ¹⁴ |

HEAT CURE TIMES

| <i>Dow Corning</i> [®] brand Product | Heat Cure Time | |
|---|---------------------------|---------------------------|
| | at 125°C (257°F), minutes | at 150°C (302°F), minutes |
| 577 Primerless Silicone Adhesive | 60 | - |
| 3-6876 Primerless Silicone Adhesive | 60 | 30 |
| 3-6611 Primerless Silicone Adhesive | 60 | 30 |
| 3-6265 Primerless Silicone Adhesive | 60 | 30 |
| EA-6052 Fast Low-Temp Cure Adhesive | 30 | 10 |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | 30 | 10 |

hour for these products until a surface skin begins to form. 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[®] Q3-6093 Silicone Adhesive is the only two-part condensation curing product. Once mixed, cure progresses rapidly at room temperature. Good strength is attained within an hour but full properties are not reached for a number of days. Q3-6093 adhesive contains its 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. Working time is only a few minutes.

Heat Cure

The addition curing adhesives (577, 3-6876, 3-6611, 3-6265, EA-6052 and EA-6054) should be cured at 100°C (212°F) or above. The cure rate is rapidly accelerated with heat (see cure schedules in table). For thicker sections or if voiding is observed, a 30 minutes 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. These adhesives generally have long working times.

PREPARING SURFACES

All surfaces should be thoroughly cleaned and/or degreased with *Dow Corning*[®] brand OS Fluids, naphtha, mineral

spirits, methyl ethyl ketone (MEK) or other suitable solvent. Solvents such as acetone or isopropyl alcohol (IPA) do not tend to remove oils well, and any oils remaining on the surface may interfere with adhesion. 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. Different cleaning techniques may give better results than others. Users should determine the best techniques for their 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”) 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.

PRIMER SELECTION GUIDE

These values are not intended for use in preparing specifications.

| <i>Dow Corning</i> [®] brand Primer or Adhesion Promoter | Flash Point, °C (°F) | Volatile Organic Content (VOC), grams/liter ⁴ | Special Properties | For Use On | For Use With | Silicone Product Examples |
|---|----------------------|--|-----------------------------------|--|----------------------------------|---------------------------|
| P5200 Clear ¹ | 32 (90) | 110/705 | | Most metals, glass, ceramics and some plastics | Pigmented two-part addition cure | 160, 165, 170 |
| 1200 Clear | 17 (63) | 748 | | | | |
| 1200 Red | 17 (63) | 774 | Colored for easier identification | | | |
| P5200 Red ² | 32 (90) | 110/705 | | Most metals, glass and ceramics | All one-part alcohol cure | 3140, 3145, 838, 3-1753 |
| 1204 | 15 (59) | 774 | | | | |
| P5204 ³ | 18 (64) | 205/591 | | Most plastics | All | |
| 1205 | 5 (41) | 861 | Film-forming | | | |
| 3-6060 | 37 (99) | 780 | Improves inhibition resistance | Most plastics and metals | All two-part addition cure | 182, 184, 186 |
| 92-023 | -4 (25) | 678 | | Most metals, glass and ceramics | | |
| <i>Sylgard</i> [®] Prime Coat | -3 (27) | 687 | | | | |

¹P5200 Clear is a low-VOC alternative to 1200 Clear.

²P5200 Red is a low-VOC alternative to 1200 Red.

³P5204 is a low-VOC alternative to 1204.

⁴The lower VOC value is for states and air quality management districts that have recognized volatile methylsiloxanes as VOC exempt.

LISTINGS AND SPECIFICATIONS

| <i>Dow Corning</i> [®] brand Product | UL Reference | | Mil Spec | |
|--|-----------------------------|--|---------------------------------|--|
| | Flammability Classification | Temperature Index, °C, Electrical/Mechanical | Specification | Type, Class, Group |
| One-Part Moisture Cure RTV | | | | |
| 838 Silicone Adhesive/Sealant | 94 HB | 105/105 | – | – |
| 839 Silicone Adhesive/Sealant | – | – | – | – |
| 3165 Fast Tack RTV Adhesive/Sealant | 94 V-0 | 105/105 | – | – |
| 3145 Silicone Adhesive | – | 180/180 ¹ 200/200 ² | MIL-A-46146 Rev. B, Amend. 3 | Type I, Group II, CERT (clear); Group III, CERT (gray) |
| 3140 RTV Coating | 94 V-1 | 180/180 | MIL-A-46146 Rev. B, Amend. 3 | Type II, Group I, CERT |
| 3-1744 Conformal Coating | 94 V-0 ³ | 105/105 | – | – |
| Two-Part Room Temperature Condensation Cure | | | | |
| Q3-6093 Silicone Adhesive | – | – | – | – |
| Heat Cure | | | | |
| 577 Primerless Silicone Adhesive | 94 V-0 | 105/105 | MIL-PRF-23586F (Grade B2) | Type II, Class IV, QPL |
| 3-6876 Primerless Silicone Adhesive | – | – | – | – |
| 3-6611 Primerless Silicone Adhesive | – | – | – | – |
| 3-6265 Primerless Silicone Adhesive | – | – | – | – |
| EA-6054 Thixotropic Fast Low-Temp Cure Adhesive | – | – | – | – |
| EA-6052 Fast Low-Temp Cure Adhesive | – | – | – | – |

¹Clear only.

²Gray only.

³UL746C Approved.

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 useable.

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 sulfur-containing 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.

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

REVERSION

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

SOLVENT EXPOSURE

When liquid or vapor solvent or fuel exposure can occur in an application, the silicone adhesives discussed in this brochure are intended only to survive splash or intermittent exposures. They are not suited for continuous solvent or fuel exposure. 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 and 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.

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 a 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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DOW CORNING

Electronics
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