



## Technical Data Sheet

### DOWSIL™ EA-9189 SC RTV Adhesive

High performance silicone adhesive/sealant

#### Features & Benefits

- Easy to use
- Neutral cure
- Excellent unprimed adhesion to many substrates
- Low silicone volatility
- UL 94 V-0
- No mixing required

#### Composition

- One-part, neutral alkoxy-cure silicone sealant

#### Applications

- Sensitive PCB system devices requiring very low volatiles in a higher durometer sealant/adhesive.
- Sealant/adhesive used in sensitive PCB system devices requiring moderate thermal management performance.

#### Typical Properties

Specification Writers: These values are not intended for use in preparing specifications.

| Test <sup>1</sup> | Property                       | Unit    | Result |
|-------------------|--------------------------------|---------|--------|
|                   | One or Two-part                |         | One    |
|                   | Color                          |         | White  |
| CTM0364           | Extrusion Rate                 | g/min   | 530    |
| CTM0098           | Skin Over Time at 25°C         | min     | 12     |
| CTM0097           | Specific Gravity (Uncured)     |         | 1.74   |
| CTM0540           | Specific Gravity (Cured)       |         | 1.77   |
| CTM0099           | Durometer                      | Shore A | 66     |
| CTM0243           | Unprimed Adhesion-lap Shear AI | MPa     | 1.5    |
| Hot Disk          | Thermal Conductivity           | W/mK    | 0.82   |
| CTM0137A          | Tensile Strength               | MPa     | 2.4    |
| CTM0137A          | Elongation                     | %       | 46     |

1. CTM: Corporate Test Method, copies of CTM's are available on request.

## Typical Properties (Cont.)

| Test    | Property                     | Unit   | Result        |
|---------|------------------------------|--------|---------------|
| CTM0114 | Dielectric Strength          | kV/mm  | 22.1          |
| CTM0112 | Dielectric Constant @ 10 KHz |        | 3.44          |
| CTM0249 | Volume Resistivity           | Ohm*cm | 2.2E15        |
|         | Volatile Content (D4-D10)    | ppm    | 70            |
|         | UL 94                        |        | V-0 (E251343) |

### Description

DOWSIL™ RTV neutral sealants are designed to provide long-term bonding and protection against moisture, environmental degradation, mechanical and thermal shock, and vibration where a room-temperature-curing product is preferred.

### Application Methods

Automated or manual needle dispense systems.

#### Substrate Preparation

All surfaces must be clean and dry. Degrease and wash off any contaminants that could impair adhesion. Suitable solvents include isopropyl alcohol, acetone, or methyl ethyl ketone.

Certain plastics may require specific surface treatment to obtain optimum adhesion. Contact your local Dow Technical support for further information.

#### How to Apply

Apply a bead of DOWSIL™ EA-9189 SC RTV Adhesive to one of the prepared surfaces, then quickly cover with the other substrate to be bonded. On exposure to moisture, the freshly applied material will “skin over” in about 12 minutes at room temperature and 50% relative humidity. Any tooling should be completed before this skin forms. The surface is easily tooled with a spatula.

### Pot Life and Cure Rate

After skin formation, cure continues inward from the surface. In 24 hours (at room temperature and 50% relative humidity), DOWSIL™ EA-9189 SC RTV Adhesive will cure to a depth of about 2 mm. Very deep sections, especially when access to atmospheric moisture is restricted, will take longer to cure completely. Cure time is also extended at lower humidity levels. Before handling and packaging bonded components, users are advised to wait a sufficiently long time to ensure that the integrity of the adhesive seal is not affected. This will depend on many factors and should be determined by the user for each specific application.

### Handling Precautions

PRODUCT SAFETY INFORMATION REQUIRED FOR SAFE USE IS NOT INCLUDED IN THIS DOCUMENT. BEFORE HANDLING, READ PRODUCT AND SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE SAFETY DATA SHEET IS AVAILABLE ON THE DOW WEBSITE AT DOW.COM, OR FROM YOUR DOW SALES APPLICATION ENGINEER, OR DISTRIBUTOR, OR BY CALLING DOW CUSTOMER SERVICE.

**Usable Life and Storage**

When stored at or below 30°C (86°F) in the original unopened containers, DOWSIL™ EA-9189 SC RTV Adhesive has a usable life of 9 months from the date of manufacture. Because DOWSIL™ EA-9189 SC RTV Adhesive cures by reaction with moisture in air, keep the container tightly sealed when not in use. A plug of used material may form in the tip of a tube or cartridge during storage. This is easily removed and does not affect the remaining contents. In pails, a skin may form on the surface. This should be removed before placing in dispensing equipment.

**Packaging Information**

DOWSIL™ EA-9189 SC RTV Adhesive is available in standard cartridge, pail and drum packaging. Detailed container size information should be obtained from your Dow contact.

**Limitations**

This product is neither tested nor represented as suitable for medical or pharmaceutical uses.

**Health and Environmental Information**

To support customers in their product safety needs, Dow has an extensive Product Stewardship organization and a team of product safety and regulatory compliance specialists available in each area.

For further information, please see our website, [dow.com](http://dow.com) or consult your local Dow representative.

**Disposal Considerations**

Dispose in accordance with all local, state (provincial) and federal regulations. Empty containers may contain hazardous residues. This material and its container must be disposed in a safe and legal manner.

It is the user's responsibility to verify that treatment and disposal procedures comply with local, state (provincial) and federal regulations. Contact your Dow Technical Representative for more information.

**Product Stewardship**

Dow has a fundamental concern for all who make, distribute, and use its products, and for the environment in which we live. This concern is the basis for our product stewardship philosophy by which we assess the safety, health, and environmental information on our products and then take appropriate steps to protect employee and public health and our environment. The success of our product stewardship program rests with each and every individual involved with Dow products - from the initial concept and research, to manufacture, use, sale, disposal, and recycle of each product.

**Customer Notice**

Dow strongly encourages its customers to review both their manufacturing processes and their applications of Dow products from the standpoint of human health and environmental quality to ensure that Dow products are not used in ways for which they are not intended or tested. Dow personnel are available to answer your questions and to provide reasonable technical support. Dow product literature, including safety data sheets, should be consulted prior to use of Dow products. Current safety data sheets are available from Dow.

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