



## Dow Corning® EA-5151 Quick in Connect (QiC) Adhesive

*Instant Adhesion for Transportation Electronics*

### FEATURES AND BENEFITS

- Single-component RTV silicone adhesive
- Instant adhesion for immediate handling of components
- Room temperature neutral or moisture cure (no oven required)
- Improved throughput time
- Reliable performance
- Chemical-, water- and dust-proofing capabilities
- Ideal for interior electronics (i.e. active safety, advanced driver assistance, infotainment systems)
- Greater performance from less material (for lower mass and potentially higher savings)
- Shock absorption and impact resistance
- Primerless adhesion to more substrates, including most plastics and metals
- UV inspection of adhesive bead for quality control
- Solventless for ease of processing
- Low odor, low VOCs (<15 g/L )
- No skin-sensitizing isocyanates
- Extended open times
- Enables new design capabilities
- Reliable, global supply chain
- Proven in a leading Tier 1 global production system
- Global technical support system

### IMAGINE

Transportation electronics manufacturers have wished for an adhesive solution that cures faster — and at lower temperatures — while delivering strong adhesion properties across a wide range of materials. Now there's an answer that harnesses the durability and excellent performance characteristics of silicones.

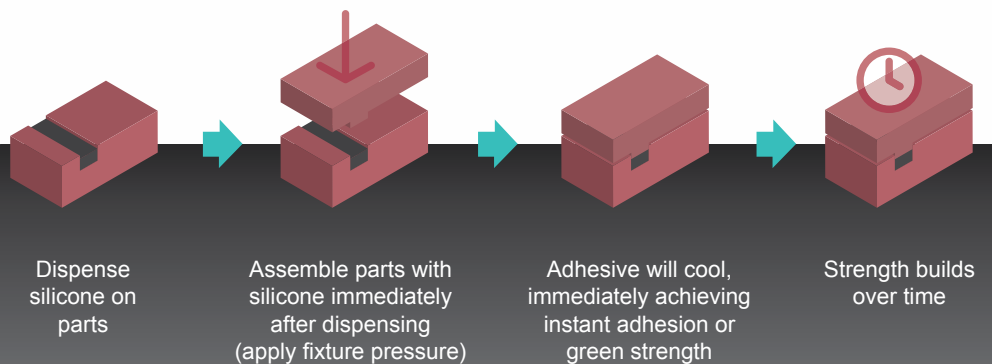
Supporting the OEM and Tier 1 need for an accelerated assembly process, Dow Corning scientists have collaborated with the automotive industry and developed a new solution for transportation electronics: a strong, durable silicone adhesive with instant green strength.

*Dow Corning*® EA-5151 Quick in Connect (QiC) Adhesive is the first product in the QiC series. It is a one-part, low-odor silicone adhesive that requires no primers to bond strongly with most common substrates. Assembled parts can be handled immediately after application, often eliminating wait time and assembly aids and parts such as mechanical fasteners and screws.

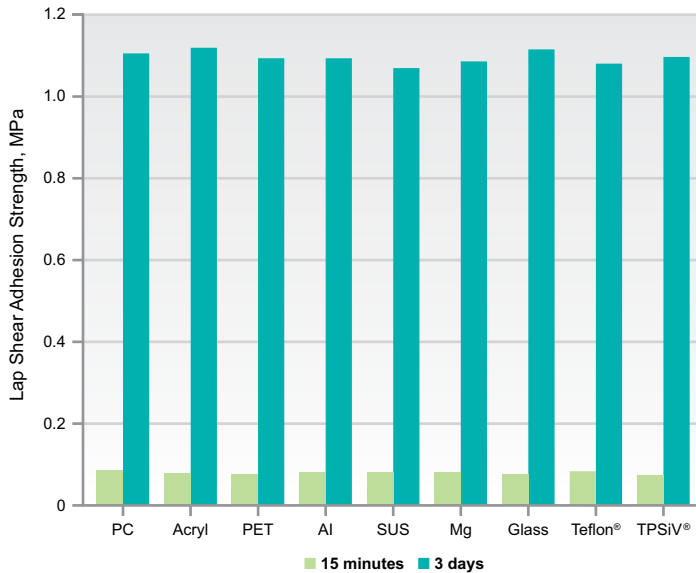
*Dow Corning* EA-5151 QiC Adhesive cures to a solid at room temperature and reacts with ambient moisture to become a viscoelastic material with enhanced physical properties. This silicone is flexible and shock and impact resistant.

Another benefit for OEM and Tier 1 manufacturers is the reworkability of *Dow Corning* EA-5151 QiC Adhesive. The adhesive can be removed easily and reapplied within the first 24 hours or longer.

### Adhesive Application ASSEMBLY CONCEPT



## PRIMERLESS ADHESION TO VARIOUS SURFACES



Lap shear adhesion strength to various substrates as a function of cure time at ambient conditions (15 min. and 3 days) for *Dow Corning*® brand Silicone Adhesives. *TPSiV*® is a patented thermoplastic vulcanizate from Multibase, a Dow Corning company.

- Adhesion strength unaffected by substrate material of construction including low energy surfaces
- Sufficient initial adhesion (green strength) in order to proceed to the next processing step
- Adhesion strength increases after 3 days

Contributing to a potential lower cost of ownership, the adhesive does not require primers, solvents or ovens. This can also:

- Support environmental programs
- Reduce both manufacturing equipment and materials
- Improve throughput time
- Reduce material waste

This unique silicone adhesive seals and protects automotive electronics and is ideal for interior electronics, such as:

- Display modules (information, entertainment, navigation, active safety systems)
- Advanced driver assistance system modules
- Seat electronics
- Sensors (such as chemical, gas, electrical, light, camera)
- Battery pack modules and other assemblies that require oven-free cure
- Control units (power, engine, transmission, brakes, lighting, safety, steering)



## MATERIAL PROPERTIES

Property	<i>Dow Corning</i> ® EA-5151 QiC Adhesive
Description	One-part, neutral (moisture) cure, silicone adhesive
Appearance	Black
Nonvolatile content	>98.5 percent
Viscosity at 120 °C	55 to 65 Pa-s (55,000 to 65,000 cP)
Tensile strength	4.5 to 4.7 MPa
Elongation	>900 percent
Lap shear adhesion to polycarbonate, after 1 day/7 days	0.5/1.7 MPa
Open time/assembly time	15 minutes
Durometer, Shore A	55 to 57 points
Pot life at 120 °C	24 hours
Service temperature range	-45 to 150 °C

## Silicone Solutions

Because transportation electronics depend on reliable, durable and waterproof performance, silicone technology can be an excellent solution for your challenges.

A leading supplier of silicones for more than seven decades, Dow Corning has a proven track record of reliably delivering targeted properties consistently. With batch-to-batch reproducibility, Dow Corning products are backed by certified data and 24/7 global technical support.

Count on us for a host of analytical and technical services — ranging from material qualification and testing through manufacturing start-up. Our extensive knowledge of materials and processes can often translate into manufacturing and process efficiencies for you. More than a world-class materials supplier, Dow Corning is a dedicated collaborator.

## How can we help you today?

When you need innovation, Dow Corning can help. *Dow Corning*® brand solutions are dedicated to meeting your needs for special materials, collaborative problem solving and innovation support. Learn how we can help you **IMAGINE** better solutions for your applications at [dowcorning.com/electronics](http://dowcorning.com/electronics).

Images: AV22155, AV21746

### 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 our 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 our products will meet the 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.

**TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, DOW CORNING SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE OR MERCHANTABILITY.**

**DOW CORNING DISCLAIMS LIABILITY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES.**

Dow Corning and *TPSiV* are registered trademarks of Dow Corning Corporation. The Corning portion of the Dow Corning trademark is a trademark of Corning Incorporated, used under license. *Teflon* is a registered trademark of DuPont Company.

© 2016 Dow Corning Corporation, a wholly owned subsidiary of The Dow Chemical Company. All rights reserved.