



Consumer Solutions

ADHESIVE/SEALANT SOLUTIONS FOR VEHICLE SYSTEMS DESIGN

Smart science drives bonding and sealing innovation



DESIGN FOR COST-EFFECTIVE COMPONENT BONDING AND SEALING



Meet trend-driven design needs for energy efficiency, greater comfort, safety and sustainability with adhesives and sealants from Dow. Our selection of reliable and cost-effective solutions for automotive component bonding and sealing can help you achieve:

- **Energy efficiency** by bonding innovative materials for lightweight design
- **Driving comfort** by reducing squeaks; rattles; and noise, vibrations and harshness (NVH)
- **Safety** by improving assembly strength and sealing durability
- **Sustainability** with efficient processing and reliable service life of components



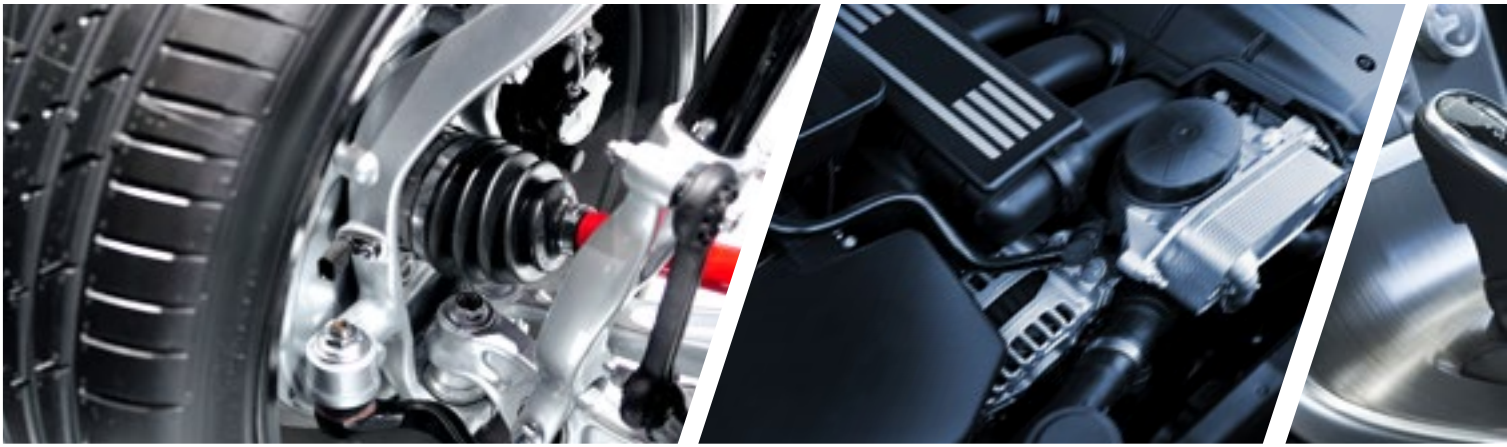
Choose from a wide range of high-performance adhesives and sealants to meet your specific process and performance requirements:

- One-part moisture-cure RTV adhesive/sealants
- Two-part condensation-cure RTV adhesive/sealants
- Heat cure adhesive/sealants
- Hot-melt adhesive/sealants

Key performance advantages of these silicone adhesives and sealants from Dow include:

- Chemical stability when exposed to automotive fluids
- Excellent resistance to UV light, ozone and weather
- Durable adhesive strength and flexibility with less aging, cracking or softening
- Stable mechanical properties in extreme heat and cold
- Excellent dielectric properties
- A variety of processing and manufacturing options with versatile cure profiles





INNOVATE WITH SMART SCIENCE

Proven, effective adhesive/sealant solutions from Dow can help you meet vehicle system design goals for innovation in cost-effective bonding and sealing of components:

POWERTRAIN

- 1 Static engine seals
- 2 Fuel system
- 3 Air intake system
- 4 Radiator end-tank seals
- 5 Cooling fan clutch
- 6 Thermostat housing
- 7 Transmission
- 8 Differential

ELECTRICAL

- 11 Control modules, motors, actuators
- 12 Moisture barriers, corrosion protection

EXTERIOR

- 13 Window sealing
- 14 Lamp assembly
- 15 Mirrors
- 16 Door handle inserts, trim
- 17 Wheel covers

INTERIOR

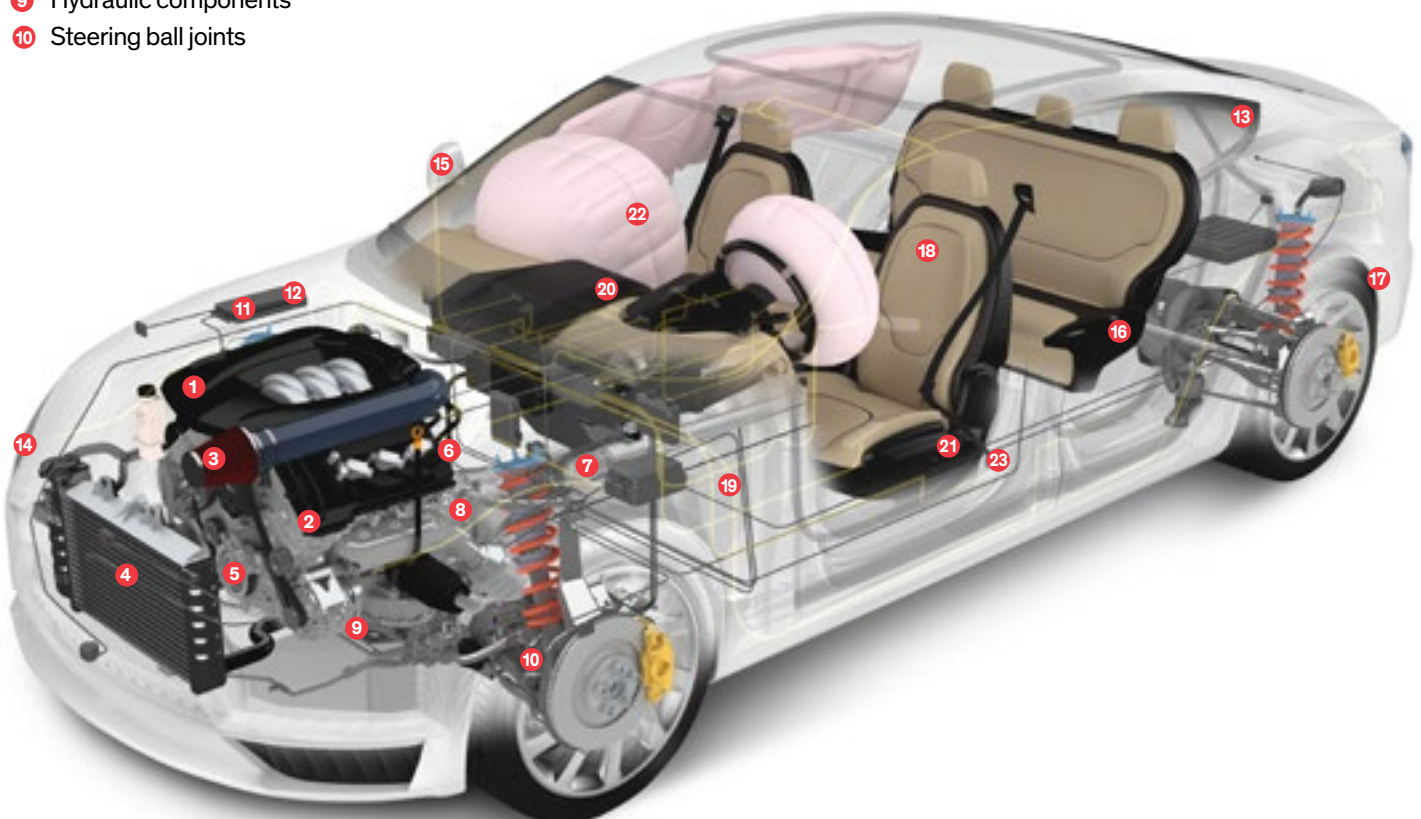
- 18 Driver-passenger cabin
- 19 Firewall
- 20 Component assemblies
- 21 Squeak, rattle, vibration prevention

SAFETY






- 22 Airbag seams
- 23 Sensors, actuators

CHASSIS AND BRAKES




- 9 Hydraulic components
- 10 Steering ball joints



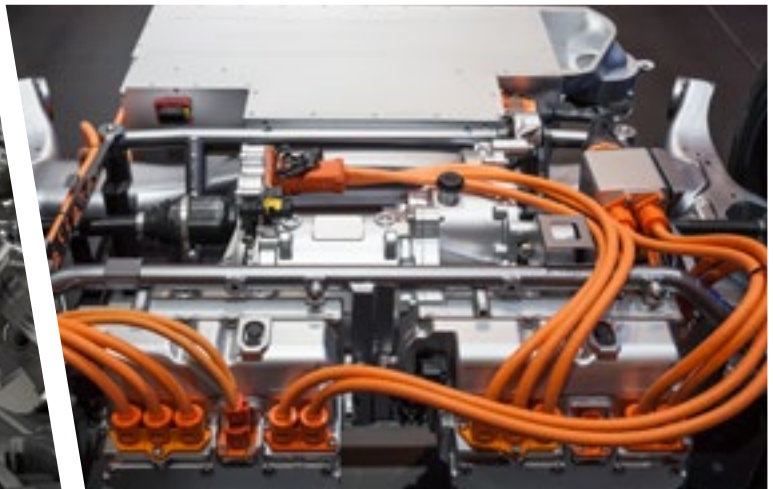
SELECTION GUIDE: ADHESIVES AND SEALANTS

| APPLICATION | DESIGN NEEDS | POTENTIAL SOLUTIONS |
|--|------------------------------------|---|
| POWERTRAIN SYSTEMS | | |
|  | Static engine seals | Seal in oil or coolant from -40 to 150°C and under 10 psi pressure; compression gasket or adhesive seal |
|  | Fuel system | Seal in fuel over a wide range of temperatures and pressures with minimal acceptable flange widths |
|  | Air intake/induction system | Seal out moisture, dust and contaminants; seal in pressure; compression seal or gap-filling adhesive bond |
|  | Radiator end-tank seals | Seal in coolant at temperatures from -40 to 125°C and pressures up to 20 psi; compression gasket designed for engineered groove |
|  | Cooling fan clutch seals | Seal in torque transfer fluid; easy to dispense; adhesive/gap-sealing performance |







| APPLICATION | DESIGN NEEDS | POTENTIAL SOLUTIONS |
|---|--|---|
| POWERTRAIN SYSTEMS (continued) | | |
|  <p>Cooling system thermostat housing</p> | Seal in coolant under pressure from -40 to 125°C; robotically dispensable | <p>Compression seal: SILASTIC™ RBL-9694-30P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-45M A&B Liquid Silicone Rubber</p> <p>Adhesive seal: DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant</p> |
|  <p>Transmission/gearbox</p> | Seal in transmission fluid at temperatures from -40 to 150°C; adhesive for engineered groove; robotically dispensable materials with various cure profiles | <p>Compression seal: SILASTIC™ RBL-9694-30P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-45M A&B Liquid Silicone Rubber</p> <p>Adhesive seal: DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant DOWSIL™ 3-7057 LV Automotive Sealant DOWSIL™ 7091 Adhesive Sealant DOWSIL™ Q3-1566 Heat Resistant Adhesive/Sealant</p> <p>Inspection cover exposed to fluid splash only: SILASTIC™ 3-8186 Thixotropic Foam SILASTIC™ RBL-9694-20P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-30P A&B Liquid Silicone Rubber</p> |
|  <p>Differential/axle cover</p> | Seal in gear oil at temperatures from -40 to 125°C; adhesive/gap seal; robotically dispensable one-part or two-part materials with various cure profiles | <p>Compression seal: SILASTIC™ RBL-9694-45M A&B Liquid Silicone Rubber</p> <p>Adhesive seal: DOWSIL™ 7091 Adhesive Sealant DOWSIL™ 732 Multi-Purpose Sealant DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant DOWSIL™ 737 Neutral Cure Sealant</p> |

NOTE: These DOWSIL™ and SILASTIC™ brand silicone adhesives and sealants are proven, effective solutions for vehicle systems design innovation. Contact your Dow representative for product options to meet specialized requirements.



| APPLICATION | | DESIGN NEEDS | POTENTIAL SOLUTIONS |
|--|---|--|---|
| ELECTRICAL SYSTEMS | | | |
|  | Electric modules, motors, actuators | Compression gasket or adhesive seal; robotically dispensable; fast heat cure or room temperature cure | Compression seal – serviceable: SILASTIC™ RBL-9694-20P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-30P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-45M A&B Liquid Silicone Rubber SILASTIC™ 3-8186 Thixotropic Foam Adhesive seal – not serviceable: DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant DOWSIL™ 7091 Adhesive Sealant DOWSIL™ 832 Multi-Surface Adhesive Sealant SILASTIC™ 747 Silicone Sealant DOWSIL™ 1080 Oxime Sealant DOWSIL™ 737 Neutral Cure Sealant DOWSIL™ 738 Electrical Sealant |
| INTERIOR SYSTEMS | | | |
|  | Driver-passenger cabin sealing | Seal out water, dirt and fumes; robotically dispensable; easy processing with one-part or two-part system | Adhesive seal: DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant DOWSIL™ 732 Multi-Purpose Sealant DOWSIL™ 832 Multi-Surface Adhesive Sealant DOWSIL™ 7091 Adhesive Sealant Compression seal: SILASTIC™ 3-8186 Thixotropic Foam |
|  | Firewall sealing | Seal off cabin from environmental penetration; robotically dispensable | Compression seal: SILASTIC™ RBL-9694-20P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-30P A&B Liquid Silicone Rubber SILASTIC™ RBL-9694-45M A&B Liquid Silicone Rubber SILASTIC™ 3-8186 Thixotropic Foam Adhesive seal: DOWSIL™ 3-0105 Automotive Sealant DOWSIL™ 3-0100 Automotive Sealant DOWSIL™ 3-0115 Automotive Sealant DOWSIL™ 732 Multi-Purpose Sealant DOWSIL™ 832 Multi-Surface Adhesive Sealant DOWSIL™ 7091 Adhesive Sealant |
|  | Component assembly bonding | Automatic dispensing; high green strength; durable, long-lasting bond strength unaffected by moisture, UV light, vibration | Hot-melt adhesive bond: DOWSIL™ HM-2500 Assembly Sealant DOWSIL™ HM-2510 Assembly Sealant |
|  | Squeak, rattle, vibration prevention | Vibration absorption/sound damping; robotically dispensable; simple and fast processing | Compression seal: SILASTIC™ 3-8186 Thixotropic Foam Adhesive seal: DOWSIL™ 732 Multi-Purpose Sealant DOWSIL™ 832 Multi-Surface Adhesive Sealant DOWSIL™ 737 Neutral Cure Sealant |

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| APPLICATION | DESIGN NEEDS | POTENTIAL SOLUTIONS |
|---|--------------------------------------|---|
| EXTERIOR SYSTEMS | | |
|  | Lamp assembly sealing/bonding | Seal and/or bond dissimilar materials; high green strength and fast curing for fast manufacturing; withstand UV and moisture exposure; long-lasting mechanical properties Compression seal: SILASTIC™ 3-8186 Thixotropic Foam Adhesive seal: DOWSIL™ 7091 Adhesive Sealant SILASTIC™ Q3-3636 Base/Catalyst SILASTIC™ EA-2727 Base Hot-melt adhesive bond: DOWSIL™ HM-2500 Assembly Sealant DOWSIL™ HM-2510 Assembly Sealant |
|  | Mirrors | Adhere glass to backing; dampen vibrations Compression seal: SILASTIC™ 3-8186 Thixotropic Foam Adhesive seal: DOWSIL™ Q3-7062 RTV Silicone Rubber |
|  | Exterior trim | Seal and/or bond; provide long-term environmental and vibration resistance; mechanical strength Adhesive seal: DOWSIL™ Q3-7062 RTV Silicone Rubber |
|  | Wheel covers | Adhesive/bonding to assemble decorative parts Adhesive seal: SILASTIC™ Q3-3636 Base/Catalyst DOWSIL™ 7091 Adhesive Sealant |

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SUSTAINABLE DESIGN SOLUTIONS

Enhance your vehicle design sustainability with silicone adhesives and sealants from Dow. These cost-effective technologies for component bonding and sealing offer automated application, high green strength with fast curing, and durable reliability to ensure high productivity and low service potential. They are proven, effective solutions that can resist aging, cracking or softening when exposed to increased pressures, aggressive fluids and extreme heat and cold; help reduce material consumption in lighter-weight vehicles; and aid local production of global vehicle platforms.

MORE DOW SMART SCIENCE

In addition to the silicone and fluorosilicone rubber featured in this selection guide, Dow also offers more smart science for vehicle system design innovation with our DOWSIL™ and SILASTIC™ adhesives and sealants.

LEARN MORE: CONTACT US

To learn more about how DOWSIL™ and SILASTIC™ brand adhesive/sealants can help meet challenging design needs in automotive and transportation applications, contact your Dow Technical Representative or visit consumer.dow.com/auto.

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