Engineered elastomer solutions for vehicle systems design

Smart science drives component durability innovation
Design for process efficiency and performance durability

Meet trend-driven design needs for energy efficiency, greater comfort, safety and sustainability with engineered elastomers from Dow. Our selection of advanced silicone and fluorosilicone rubber elastomers can help you achieve:

• **Energy efficiency** by enabling lightweight design with proven mechanical and environmental resistance
• **Driving comfort** by reducing squeaks; rattles; and noise, vibrations and harshness (NVH)
• **Safety** by improving component durability and safety system reliability
• **Sustainability** with efficient processing and increased service life of components

Choose from a wide range of high-performance engineered elastomers to meet your requirements for efficient processing and durable performance:

• High-consistency silicone rubber (HCR)
• Liquid silicone rubber (LSR)
• Fluorosilicone rubber (FSR)
• Fluoro liquid silicone rubber (F-LSR)

Key performance advantages of these engineered elastomer technologies from Dow include:

• Excellent resistance to fuel, oil and solvents
• Wide service-temperature range from -40 to 316°C (-40 to 600°F)
• Stable electrical insulating properties when exposed to severe-duty service requirements
• Excellent mechanical strength and flexibility with durable resistance to aging, cracking, softening and compression set
• Application-matched choices in hardness, specific gravity, tensile strength, elongation, color and flow properties
• Process-matched compounds and standard
Proven, effective engineered elastomer solutions from Dow can help you meet vehicle system design goals for innovation in process efficiency and performance durability:

**Innovate with smart science**

Powertrain
1. Anti-drainback oil filter valve
2. Cylinder head
3. Oil pan
4. Air intake manifold
5. Fuel delivery diaphragms
6. EGR valve diaphragms
7. Fuel quick-connect seals
8. Turbocharger, intercooler hoses
9. Radiator seals
10. Engine coolant hoses
11. Heater hoses
12. Transmission seals
13. Driveline CVJ boots
14. Engine mounts, exhaust hangers

Chassis and brakes
15. Gaskets and seals
16. Bellows, dust covers, boots

Electrical
17. Wire harness connectors
18. Coil-to-plug wire insulation
19. Spark plug boots
20. Ignition cable insulation
21. HEV-EV charging cable insulation
22. Battery connector seals

Exterior
23. Lighting

Safety
# Selection guide: Engineered elastomers

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<td><strong>Powertrain systems</strong></td>
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| Anti-drainback oil filter valve | • Stable mechanical properties  
• Resistance to engine oils, including synthetics  
• Resistance to hardening or softening over a wide range of service temperatures | Liquid silicone rubber (LSR):  
SILASTIC™ 9390-70 Liquid Silicone Rubber | ● ● ● ● |
| | | Rubber compounds for fabricated parts:  
XIAMETER™ 21096-V Silicone Rubber | ● |
| Oil pan gasket | • Good resistance to engine oils, including synthetics  
• Resist compression set and retain flexibility across service temperature range | Rubber compounds for fabricated parts:  
XIAMETER™ Q4-2918 Silicone Rubber Compound | ● |
| | | XIAMETER™ Q4-2918LV Silicone Rubber Compound | ● |
| Rocker cover gasket | • Good oil resistance  
• Good compression set resistance and compression stress relaxation | Rubber compounds for fabricated parts:  
XIAMETER™ MX 4108 Silicone Rubber | ● ● ● ● |
| | | XIAMETER™ Q4-2918 Silicone Rubber Compound | ● |
| | | XIAMETER™ Q4-2918LV Silicone Rubber Compound | ● |
| | | XIAMETER™ 24048-V Silicone Rubber | ● ● ● ● |
| | | XIAMETER™ 24057-V HCR Compound | ● |
| | | XIAMETER™ 24096-V Silicone Rubber | ● |
| | | XIAMETER™ 24087-V HCR Compound | ● ● |
| Air intake manifold gasket | • Oil resistance  
• Good aging in hot fuel vapors  
• Good resistance to compression set | Cured-in-place gasketing (CIPG):  
SILASTIC™ RBL-9694-30P Liquid Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ RBL-9694-45M Liquid Silicone Rubber | ● ● ● ● |
| Fuel delivery diaphragms | • Long-term fuel resistance  
• Good flexibility over a wide range of service temperatures | Fluoro-liquid silicone rubber (F-LSR):  
SILASTIC™ FL 30-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ FL 40-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ FL 60-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | Fluorosilicone rubber compounds (FSR):  
SILASTIC™ EFX20MHS00 Fluorosilicone Compound | ● ● ● ● |
| | | SILASTIC™ EFX30MHS00 Fluorosilicone Compound | ● ● ● ● |
| | | SILASTIC™ EFX60MLC00 Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ FCM 55-1241-FX Fluorosilicone Compound | ● |
| | | SILASTIC™ FCM 60-1278-FX FSR Rubber | ● ● ● ● |
| | | SILASTIC™ 28075HD-V Fluorosilicone Rubber | ● |
| | | SILASTIC™ 28819-V Fluorosilicone Compound | ● |
| | | SILASTIC™ 38640-V Fluorosilicone Rubber | ● ● ● ● |
| Exhaust gas recirculation (EGR) valve diaphragms | • Good fuel resistance  
• Durable flexibility in high service temperatures (200°C) | Fluoro-liquid silicone rubber (F-LSR):  
SILASTIC™ FL 30-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ FL 40-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ FL 60-9201 Fluoro Liquid Silicone Rubber | ● ● ● ● |
| | | Fluorosilicone rubber compounds (FSR):  
SILASTIC™ EFX70MLC00 Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ 28075HD-V Fluorosilicone Rubber | ● |
| Fuel delivery quick-connector seals | • Fuel resistance  
• Good flexible in heat/cold  
• Good permeation resistance  
• Good compression set resistance and stress relaxation properties  
• Low swell  
• High tear strength | Fluorosilicone rubber compounds (FSR):  
SILASTIC™ EFX70MLC00 Silicone Rubber | ● ● ● ● |
<p>| | | SILASTIC™ EFX75MLC10 Fluorosilicone Rubber | ● ● ● ● |
| | | SILASTIC™ FCM 75-4955 LC Silicone Rubber | ● ● ● ● |
| | | SILASTIC™ 28075HD-V Fluorosilicone Rubber | ● |</p>
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<td>Turbocharger, intercooler hoses</td>
<td>• Withstand a wide range of service temperatures  • Good resistance to fuel, oil and exhaust gases  • Good interlayer adhesion without cracking or peeling  • High mechanical strength</td>
<td>Silicone rubber compounds for outer layers:  SILASTIC™ HCC 65-1027-NP HCR Compound  • Self-adhesive rubber compounds:  SILASTIC™ HCE 70-4770 SA Silicone Rubber</td>
<td>NA  LA  EMEAI  APAC</td>
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<td>Fluorosilicone rubber compound for hose liners:  SILASTIC™ FCC 55-1047-FX Fluorosilicone Rubber  • SILASTIC™ FCE 50-4948 SA Silicone Rubber</td>
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<tr>
<td>Radiator seals</td>
<td>• Seal in coolant  • Maintain sealing performance from -50 to 200°C and at pressures up to 30 psi  • Provide compression gasket for engineered groove</td>
<td>Cured-in-place gasketing (CIPG):  SILASTIC™ RBL-9694-30P Liquid Silicone Rubber  • XIAMETER™ RBL-2004-70 Liquid Silicone Rubber</td>
<td></td>
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<td>Water coolant hoses and radiator hoses</td>
<td>• Good chemical/solvent resistance  • Durable high-temperature performance  • Easy processing for calendering or extrusion</td>
<td>Silicone rubber bases:  XIAMETER™ RBB-2100-60 Base  • Rubber compounds for fabricated parts:  SILASTIC™ HCR 65-1030-NP Silicone Rubber  • SILASTIC™ HCE 70-1026-NP Silicone Rubber  • SILASTIC™ 20031-D BLU Silicone Rubber Blue  • SILASTIC™ 20032-D RED Silicone Rubber Red  • SILASTIC™ 20039-D GRN Silicone Rubber Green  • SILASTIC™ 20063-L BLK Silicone Rubber Black  • SILASTIC™ 20093-T Red Silicone Rubber Red</td>
<td></td>
</tr>
<tr>
<td>Low-pressure heater hoses</td>
<td>• Good chemical/solvent resistance  • Durable high-temperature performance  • Easy processing for calendering or extrusion</td>
<td>Rubber compounds for fabricated parts:  SILASTIC™ 27788-Z Silicone Rubber  • SILASTIC™ 27790-Z Silicone Rubber</td>
<td></td>
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<tr>
<td>CVJ boots</td>
<td>• High flex-fatigue life  • Durable flexibility over a wide temperature range  • Good resistance to lubricants and road contaminants</td>
<td>Rubber compounds for fabricated parts:  SILASTIC™ HCM-1102 Silicone Rubber  • XIAMETER™ EHP60MH501 Silicone Rubber</td>
<td></td>
</tr>
<tr>
<td>Engine mounts, exhaust hangers</td>
<td>• High tear strength  • Stable mechanical properties  • Long-term resistance to extreme heat and cold</td>
<td>Rubber compounds for fabricated parts:  XIAMETER™ HCM 75-4731 LC Silicone Rubber  • XIAMETER™ 21058-V Silicone Rubber  • XIAMETER™ 24104-V Silicone Rubber  • XIAMETER™ 24140-V Silicone Rubber  • XIAMETER™ 24142-V Silicone Rubber</td>
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**NOTE:** These silicone and fluorosilicone engineered elastomers are proven, effective solutions for vehicle systems design innovation. Contact your Dow representative for product options to meet specialized requirements.
### Selection guide: Engineered elastomers

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| **Chassis and brake systems**                                              | • Good mechanical properties  
• Tear strength  
• Weatherability                                                   | Rubber compounds for fabricated parts:                                      | NA  
LA  
EMEA  
APAC |
| Bellows, dust covers, boots, gaskets, seals                               |                                                                              | SILASTIC™ HCM 1102 Silicone Rubber                                               | ●                      |
|                                                                            |                                                                              | XIAMETER™ EHP60MH501 Silicone Rubber                                             | ●  
●                      |
| **Electrical systems**                                                     | **Wire harness connector seal  
HEV/EV battery connector seals**                                             | **Rubber compounds for fabricated parts:**                                      | **                  |
|                                                                            | • Watertight protection  
• Heat and fluid resistance  
• Easy assembly with self-lubricating properties  
• High mechanical strength  
• Easy processing  
• Watertight protection  
• Heat and fluid resistance  
• Easy assembly with self-lubricating properties  
• High mechanical strength  
• Easy processing                                                   | SILASTIC™ WS 190-60-01 Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | XIAMETER™ 20003-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 20018-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 22013-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 23010-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 23023-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 23077-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ 23084-V Silicone Rubber                                                | ●                      |
|                                                                            |                                                                              | XIAMETER™ HCM 18-1265 Silicone Rubber                                            | ●                      |
|                                                                            |                                                                              | XIAMETER™ HCM 18-1303 Silicone Rubber                                            | ●                      |
| Liquid silicone rubber (LSR):                                             | **Rubber compounds for fabricated parts:**                                      | SILASTIC™ 9201-50 Liquid Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | SILASTIC™ 9202-30 Liquid Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | SILASTIC™ 9202-50 Liquid Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | SILASTIC™ 9204-30 Liquid Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | SILASTIC™ 9204-50 Liquid Silicone Rubber                                          | ●  
●  
●  
●                      |
|                                                                            |                                                                              | SILASTIC™ LTC 9402-50 Liquid Silicone Rubber                                     | ●                      |
|                                                                            |                                                                              | SILASTIC™ LC40-9001 Liquid Silicone Rubber                                       | ●                      |
|                                                                            |                                                                              | SILASTIC™ LC30-9422 Liquid Silicone Rubber                                       | ●                      |
| Fluorosilicone rubber compounds (FSR):                                    | **Rubber compounds for fabricated parts:**                                      | XIAMETER™ 20964B-T Silicone Rubber                                               | ●                      |
| Electric insulation for high voltages  
High service temperatures      |                                                                              | XIAMETER™ 23004-V Silicone Rubber                                                | ●                      |
|                                                                              |                                                                              | XIAMETER™ 25005-V Silicone Rubber                                                | ●                      |
| Hybrid and electric vehicle charging cable insulation                     | • Reliable electrical insulation  
• High mechanical strength and flexibility  
• Low flammability  
• Weatherability                                                                        | SILASTIC™ RBC 7100-60 Compound                                                  | ●  
●  
●  
●                      |

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| Lighting - secondary optics | • Optically clear  
                      • Good mold flow  
                      • Excellent feature reproduction  
                      • Lighter than glass               | SILASTIC™ MS-1001 Moldable Silicone     | • • ● ● |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
| Safety systems       |                                                  |                                           |                       |
| Airbag coating and sealing | • High performance at lower coating weights  
                      • High thermal resistivity  
                      • Excellent adhesion to PET and PA  
                      • Foldability  
                      • Flexibility                  | Coatings                        |                       |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
|                      |                                                  |                                           |                       |
| NOTE: These silicone and fluorosilicone engineered elastomers are proven, effective solutions for vehicle systems design innovation. Contact your Dow representative for product options to meet specialized requirements.
Enhance your vehicle systems design sustainability with silicone and fluoro silicone engineered elastomers from Dow. These advanced elastomer technologies can be custom-formulated for specified performance characteristics, regulatory standards and specialized process requirements. They are proven, effective solutions that can resist degradation from alternative fuels, synthetic oils and aggressive fluids; withstand increased operating temperatures; help reduce material consumption in lighter-weight vehicles; and aid local production of global vehicle platforms.

In addition to the silicone rubber materials including: liquid silicone rubber, fluoro silicone rubber, high consistency rubber, fluoro liquid silicone rubber and cured-in-place gasketing featured in this selection guide, Dow also offers more smart science for vehicle system design innovation with our DOWSIL™ adhesives and sealants.

Learn more: contact us

To learn more about how our engineered elastomers can help meet challenging design needs in automotive and transportation applications, contact your Dow Technical Representative, visit www.dow.com.