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; rattle; 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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<tr>
<td>Anti-drainback</td>
<td>• Stable mechanical properties • Resistance to engine oils, including synthetics • Resistance to hardening or softening over a wide range of service temperatures</td>
<td>Liquid silicone rubber (LSR):&lt;br&gt; S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ 9390-70 Liquid Silicone Rubber</td>
<td>NA ● LA ● EMEAI ● APAC</td>
</tr>
<tr>
<td>Oil filter valve</td>
<td></td>
<td>Rubber compounds for fabricated parts:&lt;br&gt; XIA&lt;sub&gt;M&lt;/sub&gt;IER™ 21068-V Silicone Rubber</td>
<td>●</td>
</tr>
<tr>
<td>Oil pan gasket</td>
<td>• Good resistance to engine oils, including synthetics • Resist compression set and retain flexibility across service temperature range</td>
<td>Rubber compounds for fabricated parts:&lt;br&gt; XIA&lt;sub&gt;M&lt;/sub&gt;IER™ Q4-2918 Silicone Rubber Compound</td>
<td>●</td>
</tr>
<tr>
<td>Rocker cover gasket</td>
<td>• Good oil resistance • Good compression set resistance and compression stress relaxation</td>
<td>Rubber compounds for fabricated parts:&lt;br&gt; XIA&lt;sub&gt;M&lt;/sub&gt;IER™ Q4-2918LV Silicone Rubber Compound</td>
<td>●</td>
</tr>
<tr>
<td>Air intake manifold gasket</td>
<td>• Oil resistance • Good aging in hot fuel vapors • Good resistance to compression set</td>
<td>Cured-in-place gasketing (CIPG):&lt;br&gt; S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ RBL-9694-30P Liquid Silicone Rubber</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td>Fuel delivery diaphragms</td>
<td>• Long-term fuel resistance • Good flexibility over a wide range of service temperatures</td>
<td>Fluoro-liquid silicone rubber (FLS-LSR):&lt;br&gt; S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ FL 30-9201 Fluoro Liquid Silicone Rubber</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td>Exhaust gas recirculation</td>
<td>• Good fuel resistance • Durable flexibility in high service temperatures (200°C)</td>
<td>Fluorosilicone rubber compounds (FSR):&lt;br&gt; S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ EFX20MHS00 Fluorosilicone Compound</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td>(EGR) valve diaphragms</td>
<td></td>
<td>S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ EFX30MHS00 Fluorosilicone Compound</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td>Fuel delivery quick-connector</td>
<td>• Fuel resistance • Good flexible in heat/cold • Good permeation resistance • Good compression set resistance and stress relaxation properties • Low swell • High tear strength</td>
<td>Fluorosilicone rubber compounds (FSR):&lt;br&gt; S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ EFX70MLC00 Silicone Rubber</td>
<td>● ● ● ●</td>
</tr>
<tr>
<td>seals</td>
<td></td>
<td>S&lt;sub&gt;L&lt;/sub&gt;ILASTIC™ 28075HD-V Fluorosilicone Rubber</td>
<td>● ● ● ●</td>
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| Turbocharger, intercooler hoses   | • 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 | Silicone rubber compounds for outer layers:  
SILASTIC™ HCC 65-1027-NP HCR Compound  
SILASTIC™ HCC 70-1012-GP Silicone Rubber  
SILASTIC™ HCC 70-1031-NP HCR Compound | NA         LA EMEAI APAC |
|                                  |                                                                              | Self-adhesive rubber compounds:  
Intermediate layer:  
SILASTIC™ HCE 70-4770 SA Silicone Rubber | • • • • |
|                                  |                                                                              | Fluorosilicone rubber compound for hose liners:  
SILASTIC™ FCC 55-1047-FX Fluorosilicone Rubber  
SILASTIC™ FCE 50-4948 SA Silicone Rubber | • • • • |
| Radiator seals                   | • Seal in coolant  
• Maintain sealing performance from -50 to 200°C and at pressures up to 30 psi  
• Provide compression gasket for engineered groove | SILASTIC™ RBL-9694-30P Liquid Silicone Rubber  
XIAMETER™ RBL-2004-70 Liquid Silicone Rubber | • • • • |
| Water coolant hoses and radiator hoses | • Good chemical/solvent resistance  
• Durable high-temperature performance  
• Easy processing for calendering or extrusion | 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 | • | • |
| Low-pressure heater hoses         | • Good chemical/solvent resistance  
• Durable high-temperature performance  
• Easy processing for calendering or extrusion | Rubber compounds for fabricated parts:  
SILASTIC™ 27788-Z Silicone Rubber  
SILASTIC™ 27790-Z Silicone Rubber | • • • • |
| CVJ boots                         | • High flex-fatigue life  
• Durable flexibility over a wide temperature range  
• Good resistance to lubricants and road contaminants | Rubber compounds for fabricated parts:  
SILASTIC™ HCM-1102 Silicone Rubber  
XIAMETER™ EHP60MH501 Silicone Rubber | • | |
| Engine mounts, exhaust hangers   | • High tear strength  
• Stable mechanical properties  
• Long-term resistance to extreme heat and cold | 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 | • • • • |

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.
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<tr>
<td>Chassis and brake systems</td>
<td>Bellows, dust covers, boots, gaskets, seals</td>
<td>Good mechanical properties, Tear strength, Weatherability</td>
<td>Rubber compounds for fabricated parts: SILASTIC™ HCM 1102 Silicone Rubber, XAMETER™ EHP60MH501 Silicone Rubber</td>
</tr>
<tr>
<td></td>
<td>Distributorless ignition (DLI) plug wire</td>
<td>Weatherability, Wide range of service temperatures</td>
<td>Rubber compounds for fabricated parts: XAMETER™ 29046-T Silicone Rubber</td>
</tr>
<tr>
<td></td>
<td>Spark plug boots</td>
<td>Electrical insulation for high voltages, High service temperatures</td>
<td>Rubber compounds for fabricated parts: XAMETER™ 23004-V Silicone Rubber, XAMETER™ 25065-V Silicone Rubber</td>
</tr>
<tr>
<td></td>
<td>Ignition cable insulation</td>
<td>Electrical insulation for high voltages, High service temperatures</td>
<td>Rubber compounds for fabricated parts: XAMETER™ 23004-V Silicone Rubber</td>
</tr>
<tr>
<td></td>
<td>Hybrid and electric vehicle charging cable insulation</td>
<td>Reliable electrical insulation, High mechanical strength and flexibility, Low flammability, Weatherability</td>
<td>Rubber compounds for fabricated parts: SILASTIC™ RBC 7100-60 Compound</td>
</tr>
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<td>Exterior systems</td>
<td></td>
<td></td>
<td>NA</td>
</tr>
</tbody>
</table>
| Lighting - secondary optics | • Optimally clear  
• Good mold flow  
• Excellent feature reproduction  
• Lighter than glass | SILASTIC™ MS-1001 Moldable Silicone  
SILASTIC™ MS-1002 Moldable Silicone  
SILASTIC™ MS-4002 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  
Flat fabric:  
SILASTIC™ LCF 3600 Coating  
One-piece woven (OPW)  
SILASTIC™ LCF 3760 Liquid Silicone Rubber  
SILASTIC™ 3715 Curing Agent  
Seam sealant  
SILASTIC™ SE 6777 LSR | • | • | • | • |

**NOTE:** These silicone and fluoro silicone 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 fluorsilicone 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, fluorosilicone 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.