

LSR/LIM and HCR Silicone

Molded Components & Sealing Solutions for EV and Electrification Applications



Localized Manufacture, Global Solutions

Navigating the complex landscape of electrification requires a partner with deep domain knowledge. At Parker, we excel in electromechanical systems—ensuring a comprehensive understanding of the challenges and solutions at hand. The transition to electric vehicles is more than a component switch—it's a systems engineering challenge.

Our integrated approach takes into account every part of the system from power electronics to thermal management, ensuring optimized system performance and efficiency, including assistance with component consolidation, streamlining inventory and simplifying the supply chain of complex assemblies.

Contact us to know more.



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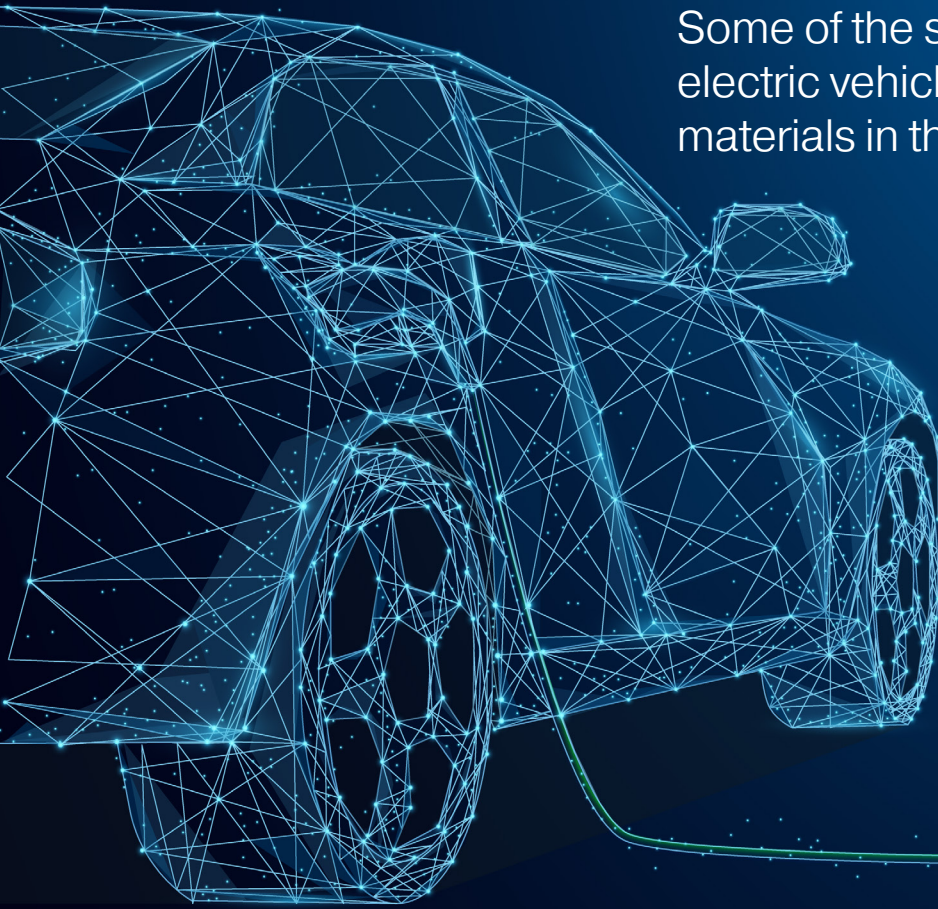


Molding Technologies & Capabilities

- Localized manufacture
- Horizontal and vertical injection and compression molding methods for LSR, HCR silicone, and organic rubber
- High volume “flashless” vacuum transfer molding with proprietary high-cavitation tooling
- Metal and rubber insert over-molding
- Rubber Materials:
Silicone, gum silicone, high consistency rubber, EPDM, nitrile, organics
- Substrate Materials:
Metal, engineered plastics, thermoplastics
- Press sizes from 28 to 300 tons provide medium- to high-volume semi-automatic, automatic cold-runner and conventional runner liquid injection molding (LIM)

ENGINEERING YOUR SUCCESS.

SILICONE TECHNOLOGY SOLUTIONS



Some of the systems and components in electric vehicles that may utilize silicone materials in their construction include:

Battery System: Silicone gaskets and seals can be used to create airtight and watertight seals in battery packs, protecting them from moisture and contaminants.

Gaskets and Seals: Silicone gaskets and seals are employed throughout electric vehicles to prevent water and dust ingress. This includes sealing connectors, charging ports, and various enclosures to maintain the integrity of electrical and electronic components.

HVAC: Silicone seals and gaskets may be used in HVAC systems to ensure airtight connections and prevent air leaks, contributing to the overall efficiency of the climate control system.

Thermal Management Systems: Silicone-based thermal interface materials (TIMs) are used to improve the thermal conductivity between heat-generating components (e.g., power electronics, electric motors) and heat sinks or cooling systems.

Safety Systems: Silicone materials may be used for sealing sensors and cameras in safety systems to protect them from environmental elements while maintaining transparency and optical clarity.

Auxiliary Systems: Silicone can be found in various small components and seals used in auxiliary systems such as power windows and door locks.

Electrical Insulation: Silicone materials are excellent electrical insulators and can be used in cable insulation, connectors, and other electrical components to prevent electrical leakage and ensure safety.

Suspension and Steering: Silicone-based materials may be used in components like bushings or isolators to dampen vibrations and reduce noise in the suspension and steering systems.

Infotainment and Connectivity: Silicone rubber keypads and buttons can be used in the interior controls and interfaces of the vehicle, providing tactile feedback and durability for infotainment systems.

Hydraulic and Brake Systems (in some cases): Silicone-based fluids are used in hydraulic brake systems, particularly in some hybrid and electric vehicles, to maintain performance at extreme temperatures and provide long-lasting durability.

Contact us today to discuss how we can accelerate your electrification projects.