The Future is Electric

An OEM's guide to sourcing die-cut battery components for EV production

SRP

Our future is becoming increasingly electrified. Everything that used to run on gas—from cars and golf carts to heavy machinery—is ready for a battery-powered transformation.

The transition to electric-powered vehicles brings a host of benefits to end users:

- Lower emissions
- Reduced pollution
- Less energy loss via heat
- Less maintenance
- Lower operating costs
- Quieter operations

Advancements in lithium-ion batteries have significantly boosted the performance of electric vehicles (EVs). These improvements have led to longer battery life, faster charging times, and greater energy efficiency, making EVs more practical and accessible for everyday use. This shift isn't just a trend, but a transition in how we power our world.

As we move toward an electrified future, the need for precision-engineered components that can support and protect these advanced battery systems is more critical than ever.

For OEMs, sourcing the right die-cut components will be crucial for the development of cutting-edge battery systems that make our world go.

That's where SRP is your partner of choice.

What's fueling demand for electrified vehicles?

Beyond advancements in lithium-ion battery technology, several factors are fueling the demand for electric vehicles (EVs). Investment in electric vehicles is surging, with companies pouring billions into research, development, and manufacturing. Government incentives, such as tax credits and rebates, make purchasing EVs more affordable and appealing to consumers. The expansion of charging infrastructure is addressing range anxiety, allowing drivers to recharge more easily on the go. Growing environmental awareness among consumers is also playing a role, as more people seek sustainable transportation options. Together, these elements are driving the shift toward electric vehicles.

For many reasons, electric vehicles offer an attractive choice for consumers, small businesses and large-scale commercial operations.

Automotive:
Fewer moving parts, reduced maintenance expenses, no tailpipe emissions, stronger acceleration.

Golf Carts:
Zero emissions, greater mobility, lower overall operating costs.

Marine:
Lower noise levels, less pollutants entering the water, better alignment with community standards, and lighter weight.

Heavy Equipment:
Reduced noise, emissions and fumes, along with lower energy and operating costs.

Landscaping Equipment:
Reduced disturbance to residents and business districts, less maintenance, enhanced workplace safety, and improved handling.

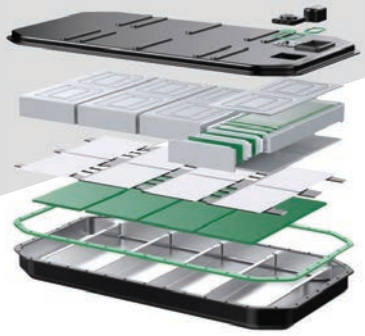
Materials Handling:
Ability to integrate battery management systems with software governing autonomous robots, lower operating costs and extended battery life.

How die-cut parts support and protect EV battery systems

Battery systems for EVs are composed of various functional components, including battery cells, modules, cooling systems, casings and the battery management system.

These require high performance materials, engineered foams and pressure sensitive adhesives, selected for optimal performance of the battery system and die cut for a precision fit.

These lightweight, innovative materials are essential. They help the battery system work as a unit, ensuring extended life and safe operation.



Insulate
Provide electrical insulation between battery cells and components, preventing short circuits and enhancing safety.

Material: 3M Flame Barrier Paper FRB-NT

Cushion
Absorb shock and vibration, protect battery cells and modules from mechanical stress to extend life spans.

Material: PORON EVExtend® product family of battery pad materials

Shield
Protection against electromagnetic interference (EMI) and radio frequency interference (RFI).

Material: 3M Aluminum/Copper Foil EMI Shielding Tape

Seal
Prevents the ingress of dust, moisture and other unwanted contaminants that would compromise battery performance.

Material: BISCO silicones for manual service disconnect seals and battery housing seals

Fasten
Secures and holds battery cells and other parts in place, ensuring structural integrity during vehicle operation.

Material: 3M High Performance Acrylic Adhesive 200MP and 300LSE for between cell attachment

Cool (Thermal management)
Dissipates heat away from the battery cells to keep ideal operating temperatures in check, preventing management stress.

Material: 3M Thermally Conductive Silicone Interface Pads 5595S and 5515S

Gap filling (Thermal management)
Supports consistent distribution of pressure and prevents movement within the battery system, maintaining stability and reliability.

Material: BISCO silicones and PORON polyurethane as cooling plate spring pads for consistent cooling performance

Sourcing the best materials for die-cut battery components

Merge into the electric era with confidence. At SRP, we create custom components for batteries using top quality materials with meticulous attention to precision and fit. Because safety, durability and reliability are at the forefront of your EV battery system, you need a partner with a proven track record of quality.

Material Sourcing

Our preferred partnerships with top-tier brands like 3M and Rogers Corporation makes a big difference in the quality, cost and overall performance of your custom parts for battery systems. As a top-tier vendor, we get access to benefits that we pass along to you.

Quality assurance:
We source everything directly from the manufacturer, so when it comes to verifying lots and shelf-life, everything is covered.

Pricing:
Access best-in-industry pricing for top-quality materials.

Expertise:
When refining your materials selection, we can connect you with product engineers to get expert guidance.

Prototyping

Test and validate your chosen materials, and go to market with confidence with our rapid prototyping services.

Customization

Everything that ships from our facility is customized for your specific product. With our versatile manufacturing capabilities, we can die cut to your exact dimensions using the most efficient process.

Efficiency

We aim to get it right the first time, keeping material waste and rework to an absolute minimum. Every production run is calibrated to ensure value without compromising quality.

Exceptional service

We're easy to work with! Our business is independently owned with all production kept in-house, which keeps us nimble and responsive. Contact us about design changes, project updates or any other request, and you can expect immediate answers and an accommodating team.

3M Preferred Converter Preferred

ROGERS CORPORATION

Rubberlite Incorporated

Let’s power the future of electric

As daily life shifts closer to electrification, demands on battery systems will continue to expand. Selecting high-quality, precisely engineered components will become increasingly critical.

At SRP, we understand the challenges, and we help you overcome them with our commitment to quality, customization and customer satisfaction. Work with us as your trusted partner in this rapidly evolving industry.

Let’s get started on your EV solution.

SRP

Contact Us

847.593.5630
info@srpco.com
srpco.com
120 Seegers Avenue
Elk Grove Village, IL 60007