

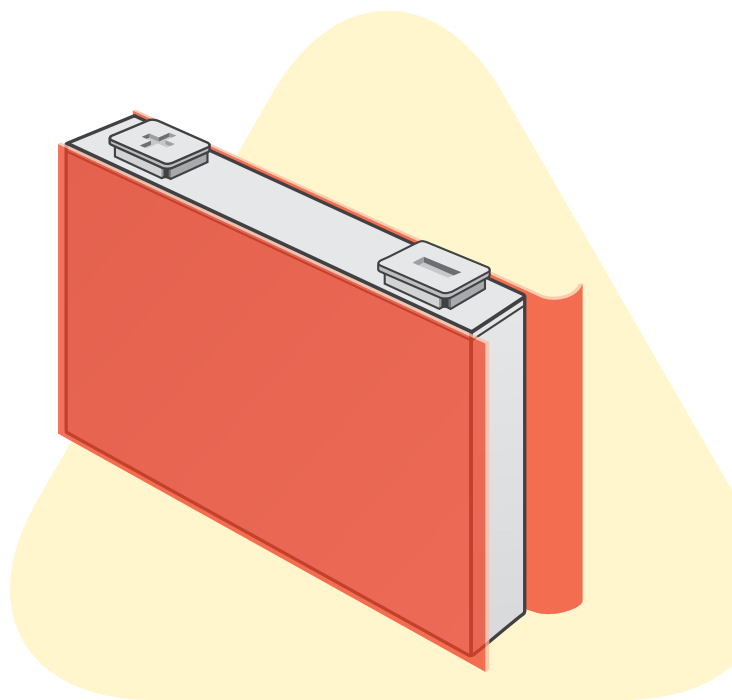
Cell Wrapping | EV Battery Solutions

Battery cells contain high voltages that can arc to other components in a battery pack. This arcing can shorten battery life and result in safety issues.

Dielectric cell wrapping films are emerging as a solution for this challenge. In addition to providing electrical insulation, such films offer corrosion resistance, a reliable bonding surface and desired aesthetics. Due to their thinness, consistency and durability, cell wrapping films are frequently preferred to spray coatings.

Avery Dennison offers a range of cell wrapping film products:

- Double-layer PET facestock options for dielectric protection redundancy
- Single-layer PET facestock options for lower cost
- Blue, yellow and gray color options for various aesthetic requirements
- Advanced acrylic pressure-sensitive adhesive that meets cell producer performance expectations by passing peel, shear and long-term aging requirements
- Options made in the U.S. for Inflation Reduction Act compliance



Cell Wrapping Tape Product Portfolio

Product	Total Construction		Facestock		Adhesive		Key Benefits
	Caliper, mils (microns)	Color	Film Type	Caliper, mils (microns)	Adhesive Type	Caliper, mils (microns)	
ES 1521 Blue	4.3 (110)	Blue	PET / PET	1.0 / 1.0 (25 / 25)	Blue Advanced Acrylic / Blue Advanced Acrylic	1.15 / 1.15 (30 / 30)	Double layer PET facestock for dielectric protection redundancy, blue advanced acrylic that meets cell producer performance expectations
ES 1421 Blue	3.3 (84)	Blue	PET	2.0 (50)	Blue Advanced Acrylic	1.3 (33.5)	Single layer PET facestock for lower cost, blue advanced acrylic that meets cell producer performance expectations
ES 1421 Yellow	3.3 (84)	Yellow	PET	2.0 (50)	Yellow Advanced Acrylic	1.3 (33.5)	Single layer PET facestock for lower cost, yellow advanced acrylic that meets cell producer performance expectations
ES 1421 Gray	3.3 (84)	Gray	PET	2.0 (50)	Gray Advanced Acrylic	1.3 (33.5)	Single layer PET facestock for lower cost, gray advanced acrylic that meets cell producer performance expectations

These tapes are available in varying slit widths.

Avery Dennison EV Battery Tape Product Portfolio

The Avery Dennison EV Battery Portfolio includes a wide range of functional bonding and protection tapes, built on multiple pressure-sensitive adhesive technologies. These are engineered to make EV batteries safer, more efficient and easier to assemble.

The portfolio can help you solve for some of the most common challenges in battery design and construction.



Reducing flammability

Acrylic- and silicone-based adhesives with Flame Tough™ flame-retardant adhesive properties allow composites and materials to meet UL® 94 V-0 and other flame requirements.



Boosting dielectric strength

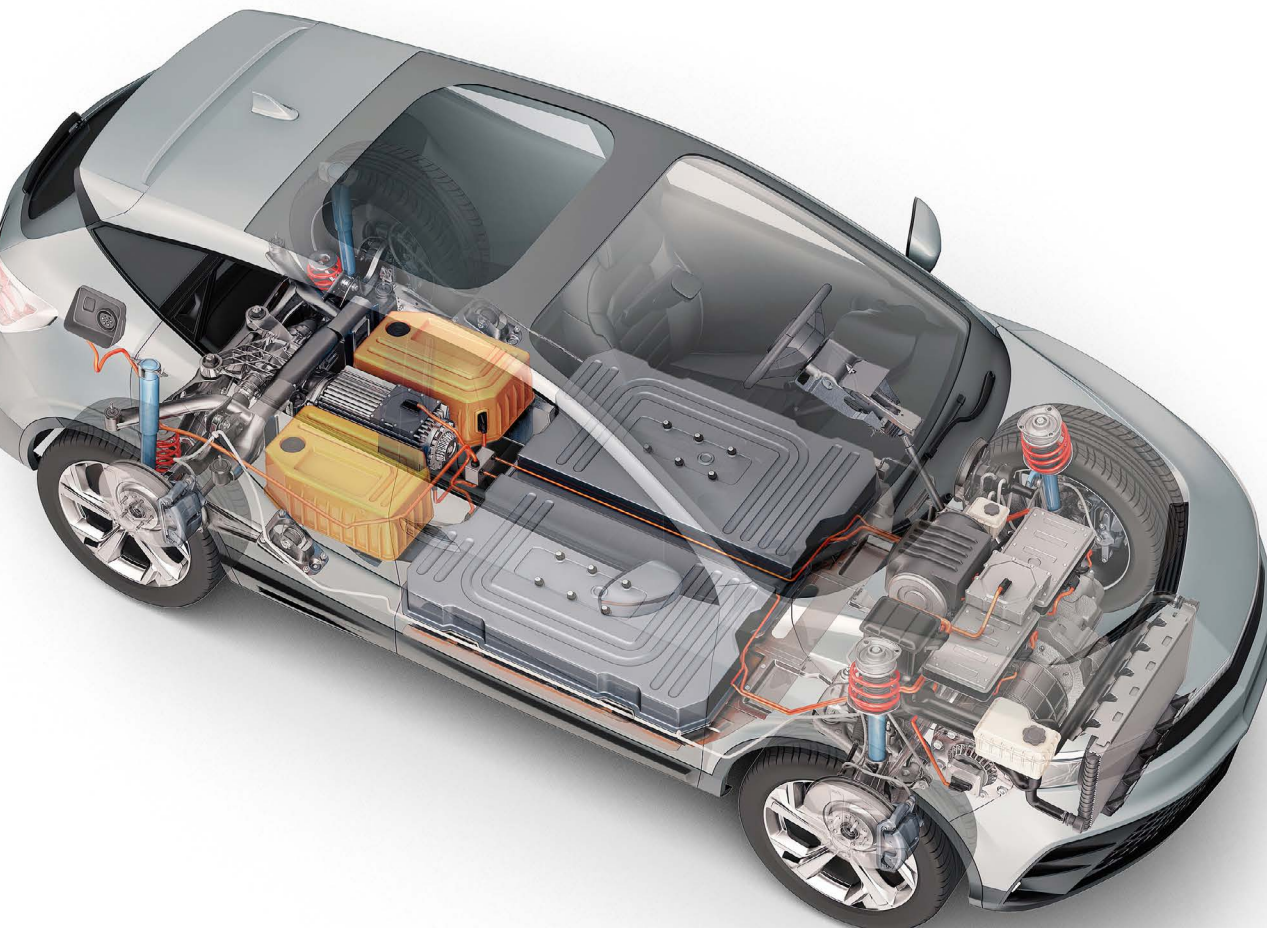
Single-coated Volt Tough™ tapes and double-coated tapes which incorporate dielectric films. Our materials and adhesives are tested for breakdown voltage and dielectric strength requirements using GB/T 1408.1-2016 and ASTM D3755 test methods.



Optimizing design and assembly

Functional tapes can replace mechanical fastening methods while offering a thinner profile, lighter weight, repositionability and instant bond.

Visit tapes.averydennison.com/evbattery to review the full breadth of EV Battery Tape Portfolio solutions.



Go beyond bonding with Avery Dennison: Expansive product selection, plus customization and testing capabilities

The Avery Dennison EV Battery portfolio offers multi-functional solutions that draw from our expansive portfolio of pressure-sensitive tapes and adhesives. We have a long track record in the automotive segment and are relied upon by OEMs and tier suppliers across the industry. Our products meet OEM specifications for a wide range of applications.

Beyond bonding means we also welcome the opportunity to collaborate with automotive OEMs and tier suppliers to develop custom tape solutions. You'll enjoy access to testing facilities and pressure-sensitive adhesive experts who understand the challenges engineers face. We can work together to produce one-of-a-kind products that give you the advantage you seek.

Collaboration

- Global reach
- New product development for custom solution applications
- Business development and specification support for emerging applications
- Application engineering and technical support

Testing

- ISO 17025 certified laboratory
- Online tool offering easy access to our database of OEM certifications
- Industry-standard and custom application testing
- Traditional pressure-sensitive adhesive bulk property testing (peel, tack and shear)
- Environmental conditioning (temperature, humidity, UV, chemical and more)
- Flame performance and dielectric strength testing at the tape and composite level



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