

 Automotive

RESICOAT®

Electric Vehicles
Switch on to an
electric future



We're driving the current
to power your future

AkzoNobel



Electric Vehicles

Switch on to an electric future

AkzoNobel has been pushing the boundaries of powder coatings for decades, committed to providing high performance and sustainable solutions the automotive industry can rely on. AkzoNobel Powder Coatings and its brands Interpon and Resicoat are trusted by the major OEMs to protect your vehicles, conventional or electric, in even the most challenging conditions.

In the 'traditional' automotive space, our high-performance Interpon powder coatings protect every part of a vehicle, inside and out - from the interior trim to the springs and wheels - from the harmful effects of chemicals, corrosion, and UV light. They are recognized and respected by global experts over the world.

Our Resicoat products also set the standards. They have been innovated specifically to enhance the safety and performance of Electrical Vehicles (EVs), with superior electrical insulating properties and enhanced thermal management to help protect the battery systems, motors and battery energy storage system.

AkzoNobel Powder Coatings are available in a number of colors, functionalities and finishes, which alongside the added advantage of being free from VOCs, means you can meet the most demanding requirements, without sacrificing on style or sustainability.

The world of EVs has a language all of its own, and we're fluent in it. As we continue to embrace a new era for the automotive industry, we're geared up to drive forward with solutions built around the vision you have for the future of your business. Our teams are here to work together with you to make our common goal for the future of EV and beyond a reality.

Leading benefits

Strength through innovation

From an electric motor to the battery system, insulating plate to the cooling system, our solutions provide vehicles and their components with exceptional resistance to thermal shocks, reliable adhesion characteristics, and high dielectric strength, to enable electrical components to perform at their best in the most challenging environments.

Global safety ratings

Our Resicoat powder coatings are tested and listed by Underwriters Laboratories Inc., and approved to UL 94 V-0 to enable vehicle systems to tolerate a certain amount of exposure to a flame without igniting. They're also tested and approved to UL 746B and UL 1446 standard, ensuring our powder coatings can resist thermal degradation and possible damage that can occur at elevated temperatures. Our UL-approved powder coatings are proven as insulation and corrosion protection solutions for parts like battery systems and cooling plates.

Exceptional durability and protection

Resicoat powder coatings are designed with durability in mind, making them tough and resilient in different operating environments while delivering a consistent, stable performance in accordance with stringent industry standards.

Enhanced operational and cost efficiency

A powder coating requires fewer stages in the application process, therefore consuming less energy, improving efficiency, and reducing costs. Further efficiencies are also achieved since any overspray can be re-used, reducing waste, and supporting a sustainable operation.

Proven sustainability

Protecting vehicles, components and battery systems for a longer life cycle ultimately supports a more sustainable automotive industry, and a more sustainable world. Our powder coatings are free from Volatile Organic Compounds (VOCs), and conform to the industry's Restriction of Hazardous Substances (RoHS) Directive.

Comprehensive product range

Battery systems

The battery system is the lifeline for any electric vehicle, storing and supplying the electricity to the motor that drives the wheels. Every part of the system needs protecting, from the battery housing, modules and busbars through to the cooling systems and battery cells. To ensure the vehicle's performance and the safety of the passengers, the battery system must be supported by a coating with excellent electrical insulation properties. This protects components from electrical shorts while helping regulate heat dissipation, preventing overheating and improving overall battery efficiency. They also need protecting against corrosion and general wear and tear, and their exposure to fluids and chemicals typical within an automotive environment.

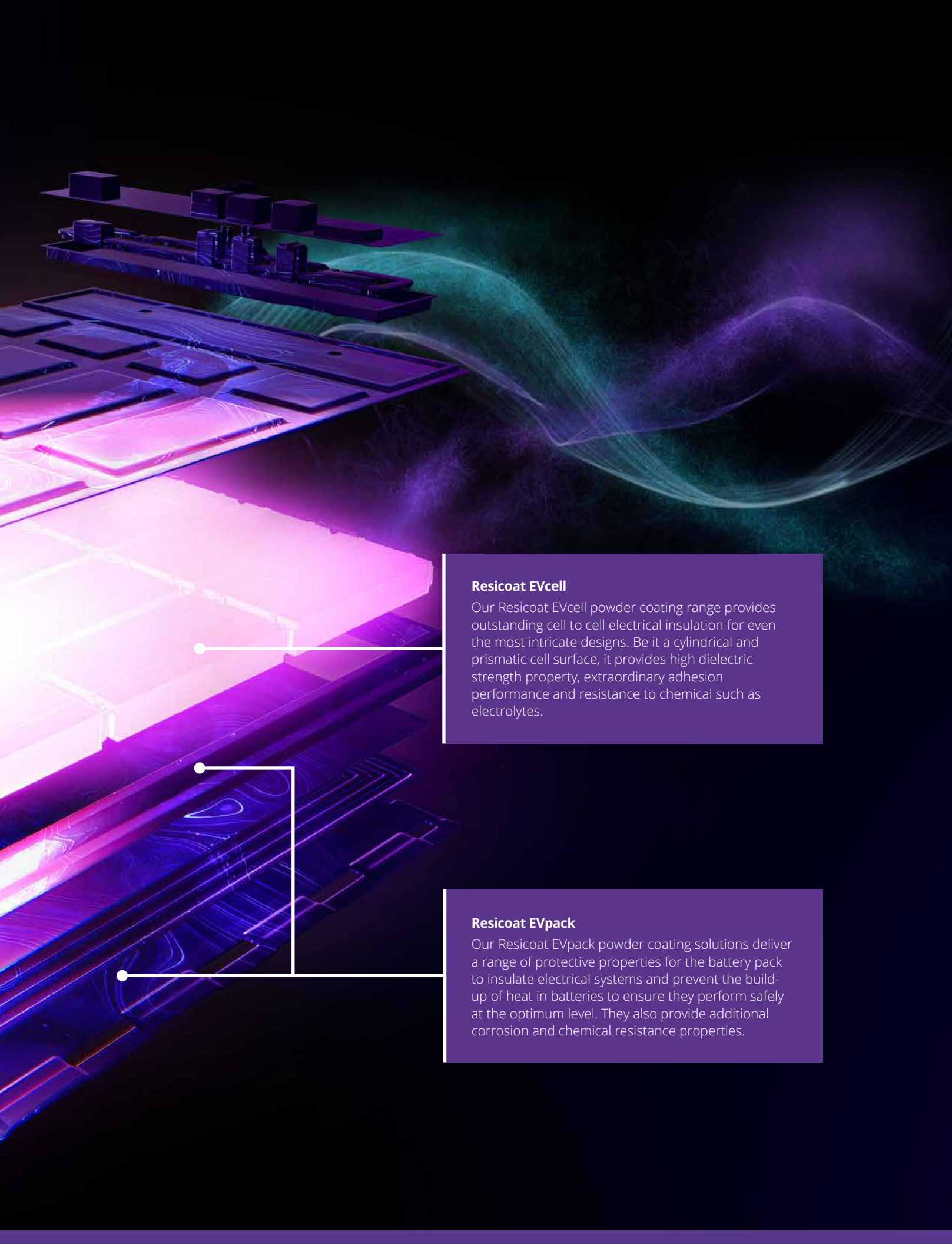
Resicoat EVbusbar

Resicoat powder coatings are used to coat the busbars that carry and distribute electricity to improve heat dissipation and support a lower fire load with a longer lifetime during thermal impact. Different grades are available to suit different applications (including nickel-, silver- and tin-plated or plain copper and aluminum busbars) with listings at Underwriter Laboratories for UL 94 (V-0) and UL 746B. Solutions have also been developed for High Voltage (HV) connector systems used as insulation for busbars, tags, connecting lugs of battery cases and battery groups in EVs.

Resicoat EVcooling

Our Resicoat EVcooling powder coatings are designed to deliver superior performance in thermal conductivity, electrical insulation, edge coverage and consistent film building in cooling tube and cooling plate applications to support vehicle safety as well as battery performance. They also provide exceptional corrosion resistance, and are tested and approved to UL 94, vertical burn test V-0 and UL 746B temperature index of 130°C (Class B) with excellent impact resistance.





Resicoat EVcell

Our Resicoat EVcell powder coating range provides outstanding cell to cell electrical insulation for even the most intricate designs. Be it a cylindrical and prismatic cell surface, it provides high dielectric strength property, extraordinary adhesion performance and resistance to chemical such as electrolytes.

Resicoat EVpack

Our Resicoat EVpack powder coating solutions deliver a range of protective properties for the battery pack to insulate electrical systems and prevent the build-up of heat in batteries to ensure they perform safely at the optimum level. They also provide additional corrosion and chemical resistance properties.

Electric motor

Electric motors drive electric vehicles as an alternative to the traditional internal combustion engine. The power for the motor comes from a large battery pack that needs to be regularly charged using charging equipment designed specifically for the task.

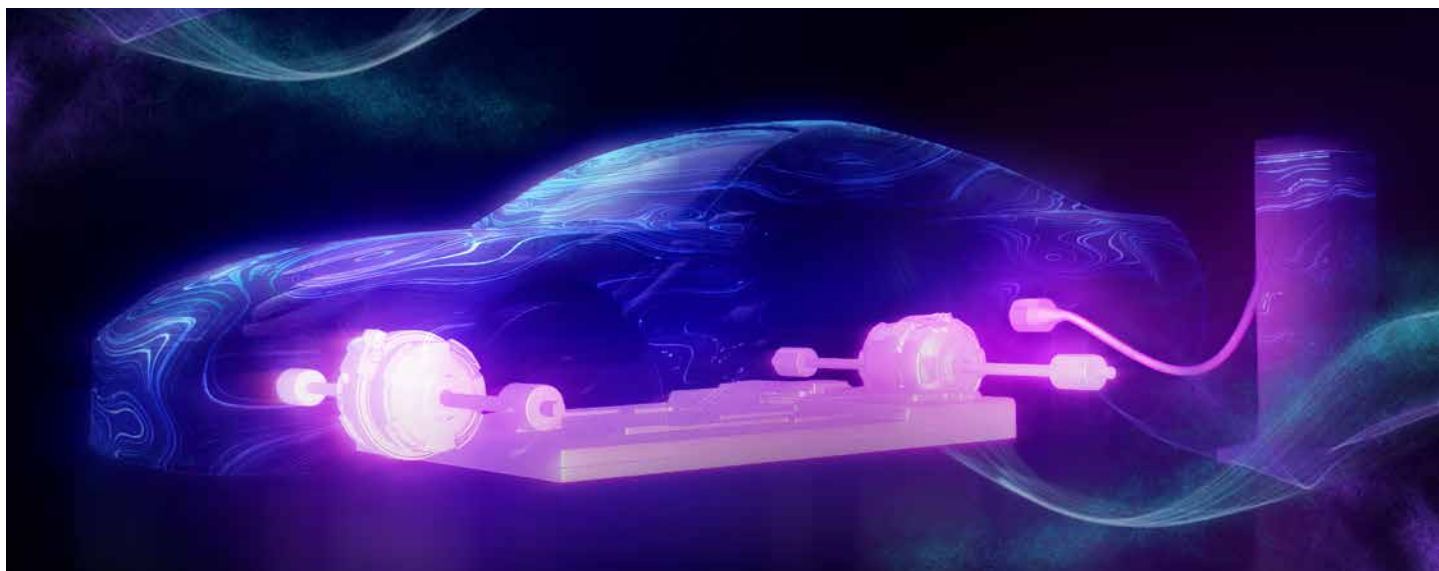
Choosing a best-in-class and corrosion protection Resicoat powder coating matched with the right application technique will deliver consistent electrical insulation for the life of the motor.

Resicoat EVmotor

The Resicoat EVmotor range includes epoxy powder solutions that are specifically designed for the electrical insulation of hairpin stators. Copper wires are bent into a hairpin and welded together. The application of Resicoat powder coatings by fluidized bed ensures a constant film build and excellent thermal protection.

Special Resicoat EV grades for hairpins are recognized by UL 1446 Class F and Class H, providing outstanding resistance against heat, chemicals and moisture. Resicoat powder coatings also deliver exceptional corrosion protection and resistance against different fluids hairpins are operating in.

For slot insulation usage, epoxy powder coatings must have the correct balance of edge coverage, flow, and gel time to fully cover and insulate the intricate structure of the stators or rotors and maintain the air gap to prevent any arcing or current breakthrough. Resicoat slot insulation powder coatings are designed specifically with this in mind, with high dielectric strength ($\geq 30 - 45$ kV/mm) and Class F (155°C) or Class H (180°C) operating temperature.



AkzoNobel

Since 1792, we've been supplying the innovative paints and coatings that help to color people's lives and protect what matters most. Our world class portfolio of brands – including International, Sikkens and Interpon – is trusted by customers around the globe. We're active in more than 150 countries and use our expertise to sustain and enhance everyday life. Because we believe every surface is an opportunity. It's what you'd expect from a pioneering and long-established paints company that's dedicated to providing sustainable solutions and preserving the best of what we have today – while creating an even better tomorrow. Let's paint the future together.

For more information please visit www.akzonobel.com.

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Speak to your local representative or contact resicoat@akzonobel.com and learn more about Resicoat solutions for Electric Vehicles.



Interpon App

Our Interpon App opens the door to all you need to know about Interpon powder coatings.

 **Automotive**

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to power your future