

# ACCELERATING ADOPTION:

How advanced materials help OEMs make EVs more attractive

The question isn't whether EVs are the future—it's when will the future get here? For more consumers to adopt EVs, OEMs need innovations that these advanced material solutions can provide.

## IT BEGINS WITH THE BATTERY

**50%** of an EV's cost is the battery.<sup>1</sup>

**1/3** of an EV's weight is the battery.<sup>2</sup>

EV manufacturers know that until batteries' cost, range, and charging power improve, consumers could shy away. These advanced materials help:



### THERMAL MATERIALS

improve battery life, speed charging, and help manufacturers minimize operating costs.



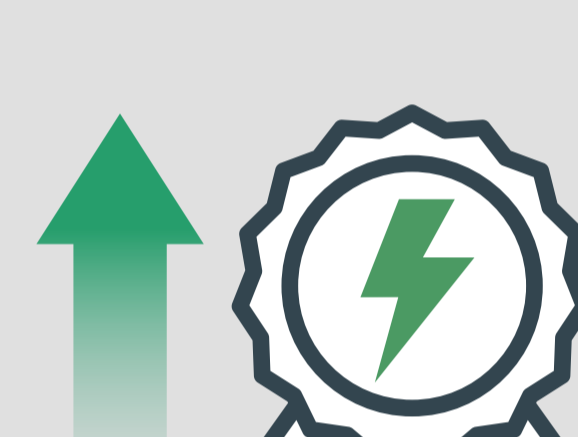
### THERMAL PROPAGATION PREVENTION

helps safeguard EVs and achieve compliance.



### LIGHTWEIGHT ADHESIVES AND GASKETING

improve range and performance while streamlining operations and augmenting sustainability.



### CONDUCTIVE COATINGS

help improve battery charging and discharging performance.

## BEYOND THE BATTERY

Advanced materials—customized to each manufacturer's need—help in three other key areas.

### MATERIALS

Too much weight means a less efficient EV.



EV models can weigh **1,000–1,600 POUNDS MORE** than their ICE counterparts.<sup>3</sup>



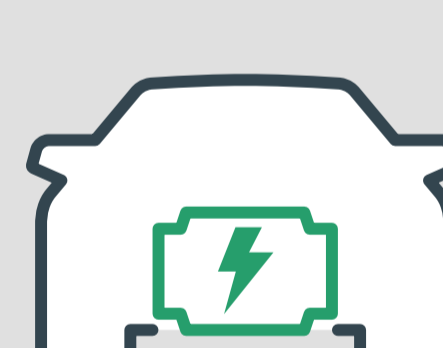
**30% THINNER** metals are now possible through advanced material breakthroughs.

### PROCESSING

Tailored chemical formulations support high-speed production with:



**5-SECOND** cure times  
**4 HOURS** open time



**100,000+ EVS** annually produced per production line

### ENGINEERING

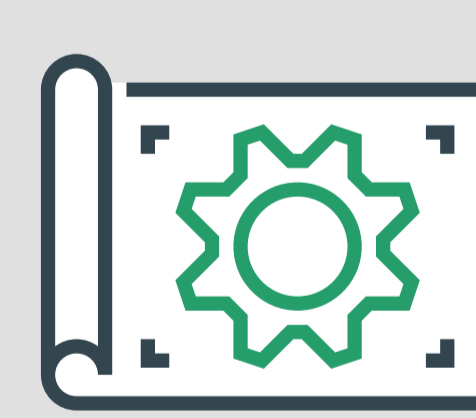
Advanced material formulators use these three approaches to gain rapid learning, time savings, and cost reduction that propel EV manufacturers forward, faster.



Advance simulations



Numerical analysis



Rapid prototyping

# THE ROAD AHEAD

Henkel collaborates with OEMs to create custom solutions that help overcome challenges and make EV adoption more attractive to consumers.

**Learn more** by reading our exclusive white paper, "More Than Just Good Chemistry: Advanced Materials' Pivotal Role in the Future of EV Adoption."

1. Statista, "Projected battery costs as a share of large battery electric vehicle costs from 2016 to 2030," August 4, 2021, <https://www.statista.com/statistics/797638/battery-share-of-large-electric-vehicle-cost/>  
 2. Fox News, "Heavy: The GMC Hummer EV's battery weighs more than some cars," February 16, 2022, <https://www.foxnews.com/auto/the-electric-gmc-hummer-evs-battery-weighs-more-than-some-cars>  
 3. CNN, "Why electric cars are so much heavier than regular cars," June 7, 2021 <https://www.cnn.com/2021/06/07/business/electric-vehicles-weight/index.html>