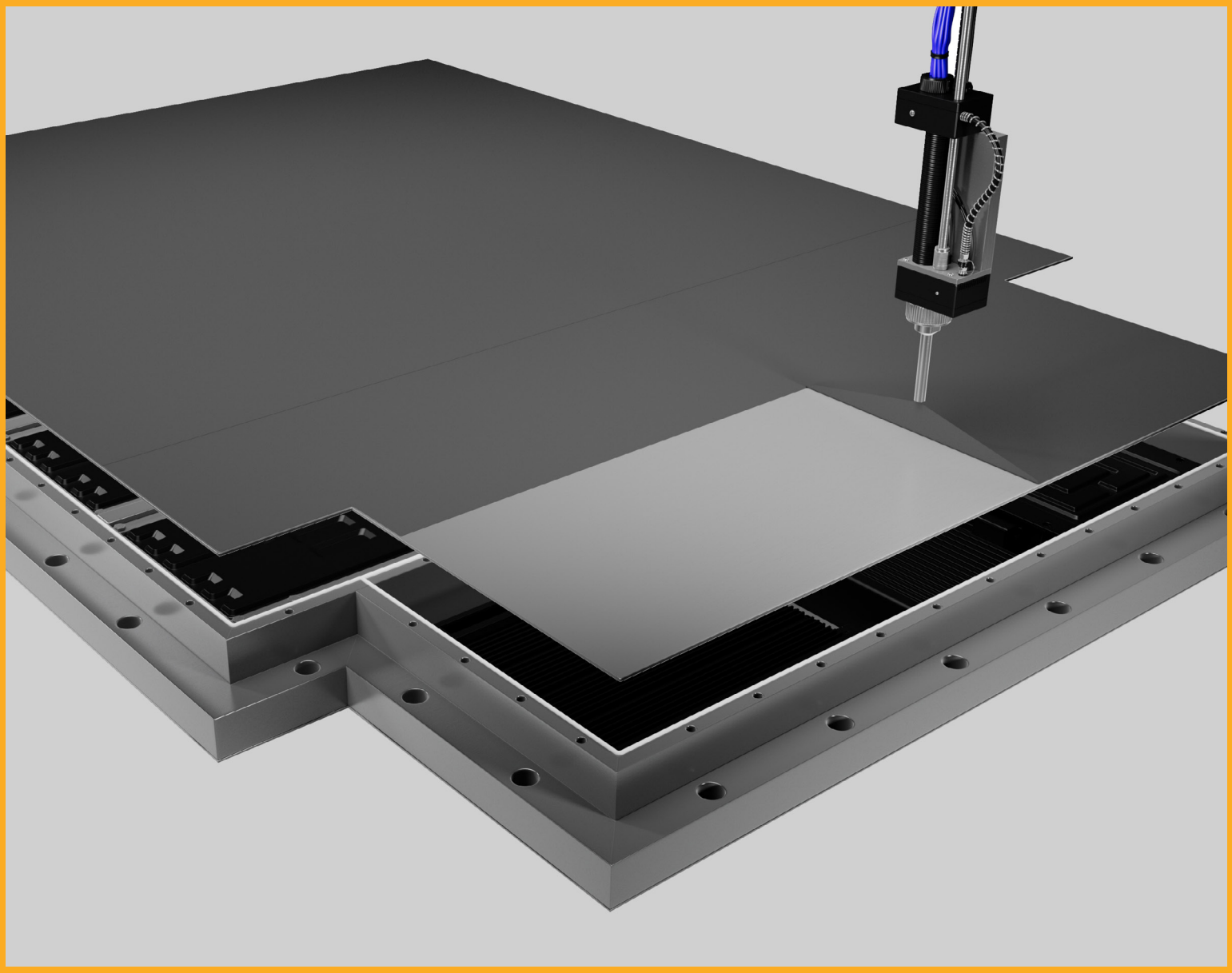


RELIABLE PERFORMANCE BEYOND THE EXPECTED

BATTERY FIRE PROTECTION

BUILDING TRUST

BATTERY FIRE PROTECTION

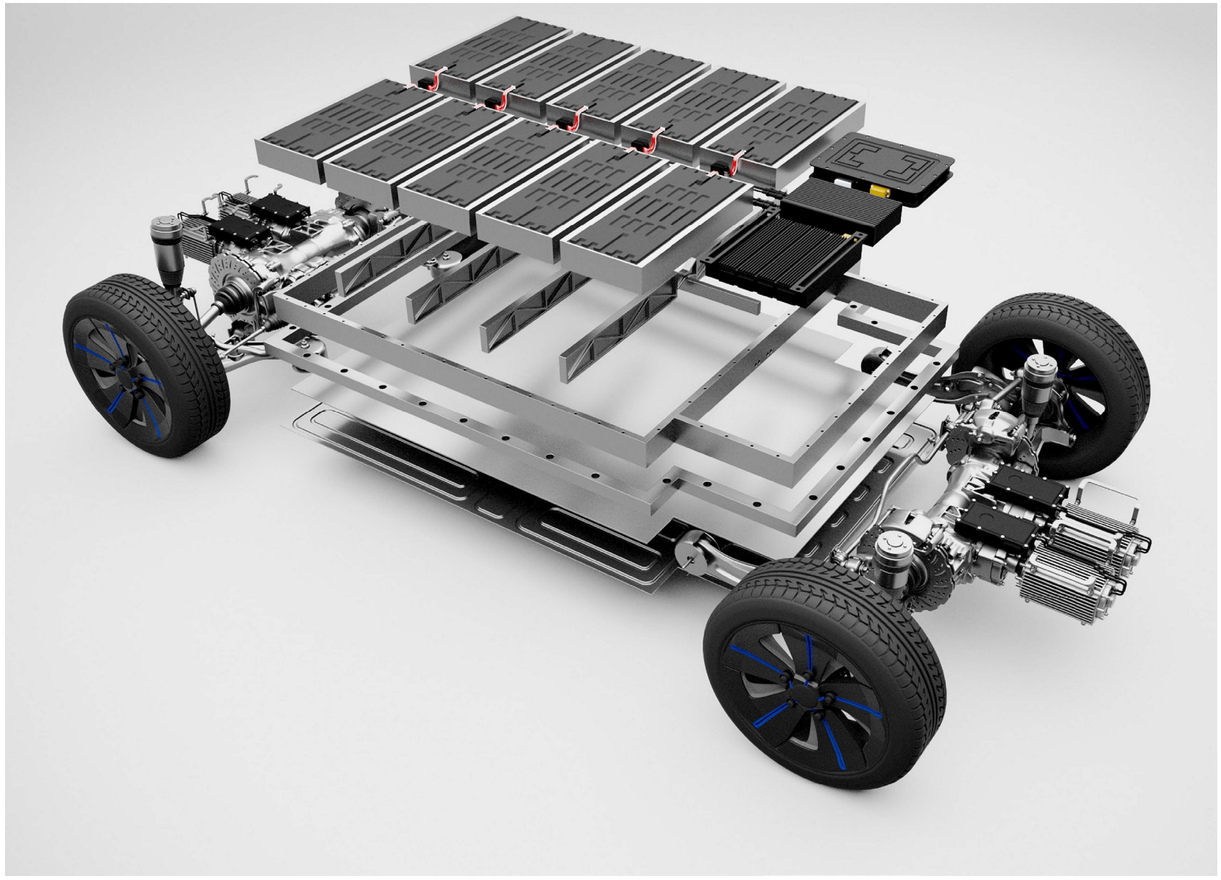
MADE SAFER WITH Sikagard®

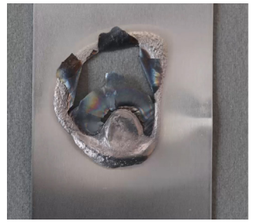
Improvements in battery cell capacity are vital to improving performance and extending the range of electric vehicles. At the same time, battery safety is essential to protecting passengers. Fortunately, Sika provides a range of innovative solutions that enable the automotive industry to produce safe and efficient batteries, including fire protection technology that sets the industry benchmark.

EXCEED THE STANDARD WITH SIKA:
China is the first country to have issued binding fire protection provisions for battery casings. Sikagard® fire protection coatings help customers not only to meet but even exceed the standards.

"BATTERIES OF ELECTRIC VEHICLES RARELY CATCH FIRE. BUT IF THEY DO, SIKA FIRE PROTECTION SOLUTIONS DELAY THE SPREAD. THIS GIVES PASSENGERS OPPORTUNITIES TO EVACUATE THE VEHICLE SAFELY."

Dr. Nicolas Morel, Head Business Development E-Mobility

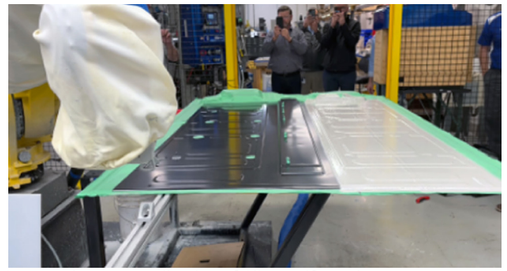




Uncoated

Sikagard® coatings protect passengers

The flame of a Bunsen burner is directed at two identical aluminum plates. The left plate is untreated, the right plate is coated with Sikagard®. After 15 seconds, the untreated plate starts to melt in places, which would have the potential to start a fire in the vehicle. By contrast, the right plate is treated with Sikagard®, an insulating protective layer; it holds the heat for up to 30 minutes. In the occurrence of a thermal event, this would give the passengers valuable time to exit the vehicle.



Automatic spray application of Sikagard® coating

Masking of flange NOT required

In situations where heat can build up in the battery because the cells are generating a lot of power or are being charged rapidly, a fire can break out. The same can be true if a battery is damaged in an accident. Effective fire protection for the battery system is therefore critically important.

Together with our e-bus manufacturing customers, Sika developed an efficient lightweight solution for delaying the spread of fire and toxic smoke in battery packs, thereby making electric buses safer. Since 2017, with the dramatic increase in EV production, the Sikagard® intumescent coatings are now widely used in electric cars. Their performance exceeds applicable government regulatory requirements for battery casings.

PROGRESS IN BATTERY TECHNOLOGY DRIVES EV DEVELOPMENT FURTHER.

EFFECTIVE HEAT MANAGEMENT.
Electric vehicle manufacturers all around the world are now adopting these rigorous fire protection provisions. Thanks to the fire protection technology developed by Sika, the highest safety standards are now being applied throughout the automotive sector. With Sikagard® products, vehicle manufacturers can be sure of meeting safety requirements in all markets.

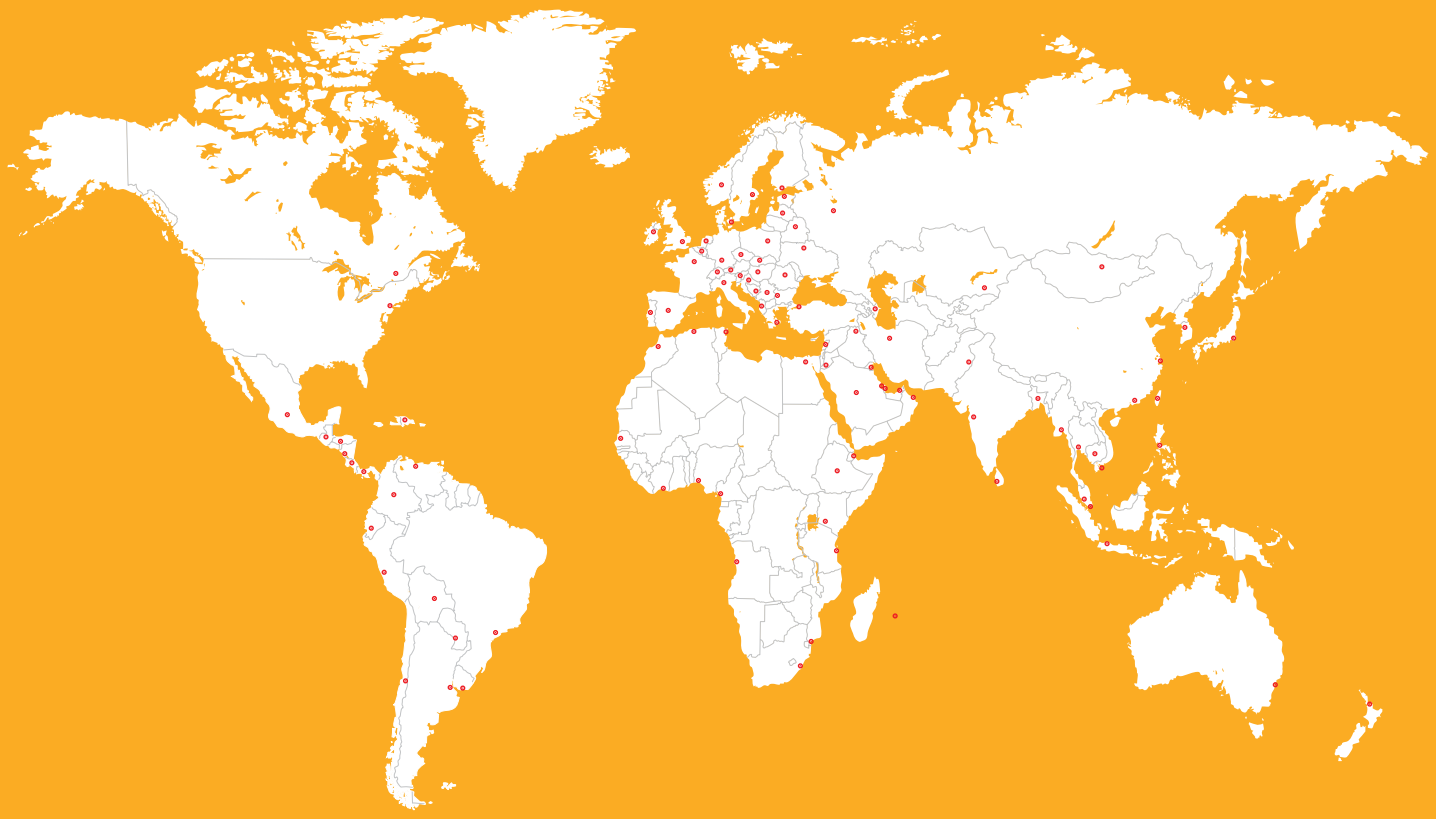
THE SIKA PRODUCT RANGE FOR BATTERY COMPONENTS PROVIDES THE HIGHEST LEVEL OF SAFETY AND IMPROVES THE PERFORMANCE OF BATTERY SYSTEMS.

30 MINUTES
is the time the battery case of an electric bus must remain intact in the event of a battery fire.

UP TO 1,200° C
is the temperature the battery case needs to withstand in the event of a battery fire in an electric vehicle.

BENCHMARK PERFORMANCE
SikaGard® products meet and exceed GB-38031, UNECE R-100 and UL94-V0 standards.

GLOBAL REACH BUT LOCAL PARTNERSHIP



FOR MORE INFORMATION:

automotive.sika.com