

FLAMEVEX™

Flame Resistant Lightweight Composites

THE ART AND SCIENCE OF

THERMOSET COMPOSITES



BEV BATTERY COVER

Engineered for Safety.
Built for Performance.

ENHANCED SAFETY
Flame resistant
thermoset technology

LIGHTWEIGHT DESIGN
Advanced composites
for weight optimization

DURABLE PERFORMANCE
Built to withstand extreme
conditions

BEV

BATTERY COVER

inquiry

For IDI's OEM and Tier 1 partners, the battery pack is a critical part for an electric vehicle. Depending on the level of power required for the electrical powertrain, the size of the pack can be over 2 square meters with 25 to 30 centimeters of depth. Due to its size, proximity to the source of energy, and the need for a perfect seal and complex shape, designers were tasked with finding a material solution which would perform at the highest fire resistance standards, offer high mechanical performance, and simultaneously reduce weight.

idea

IDI Composites International developed FLAMEVEX™: a series of highly flame-resistant SMCs with high mechanical properties and a low level of shrinkage, offering the ability to mold complex parts with dimensional stability from a lightweight solution.

IDI has developed a series of formulations and can customize mechanical properties and fire resistance depending on the structure of the part required by the OEM. This makes FLAMEVEX™ SMCs the solution for EV manufacturers seeking an alternative to traditional automotive solutions.

innovation

FLAMEVEX™ materials are not traditional thermoset composites. With FLAMEVEX™, IDI is advancing SMC to previously unknown fire performance levels without compromising thickness, strength, or moldability. Working with our OEM and Tier 1 partners, IDI's FLAMEVEX™ materials have been used on battery packs which have passed the stringent Chinese Standard GB/T 31467.3 (aka China Bonfire test) tests at thicknesses as low as 2.5 mm (with lower thicknesses in development).

