



High Flame-shielding
Long-Glass-Fiber-Reinforced PP
for Battery Enclosures

FUNCSTER™

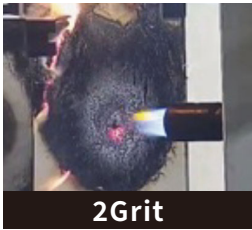
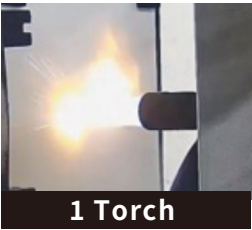
Stage	R&D	Introduction consideration	Practical stage
Keyword	Lightweighting		

Use	Battery-related components / case covers, junction boxes, etc.
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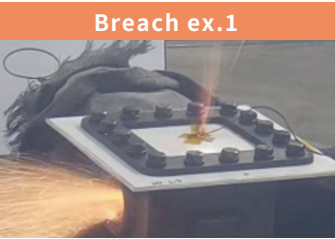
Challenge	Larger vehicle batteries require enhanced protection against thermal runaway. At the same time, vehicle weight must be reduced to improve energy efficiency, creating a need to balance safety and lightweighting.
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Solution
Lightweighting of battery cases by metal replacement with long-fiber-reinforced PP FUNCSTER™. Achieving high flame-shielding performance by combining with flame retardants, contributing to both safety and weight reduction. The following is an overview of the tests to confirm fire resistance and flame-shielding performance.

UL2596 TaG test* Breach on the 7 Grit (t = 4 mm)
Test : 15 seconds 1200°C x 3 KW flame , followed by 5 seconds of flame and grit blast.
Evaluation : Cycle repeated until sample breaches.



UL2596 BETR test* No breach (t = 4 mm)
Test : Thermal runaway test with 25 batteries
Evaluation : Check for breach in all N3 test plaques.



* TaG : Torch & Grit
BETR : Battery Enclosure Thermal Runaway

- Benefit**
- Contributes to improved vehicle energy efficiency through battery-enclosure lightweighting.
 - Can be custom-molded to fit the specific contours of batteries and peripheral components.