

# SABIC DELIVERS ROBUSTNESS AND EXTRA SAFETY SOLUTION FOR ELECTRIC VEHICLE CHARGING COUPLER

## ELECTRICAL CASE HISTORY



### APPLICATION

EV Coupler

### OEM

BALS Elektrotechnik

### SEGMENT

Electric Vehicles

### KEY CHALLENGES

Global requirements and in particular stringent flammability, electrical and mechanical aspects

### SOLUTIONS

A high temperature, high mechanical property material, VALOX™ 357XU resin with nice surface finishing from SABIC

### RESULTS

Key standards are met and BALS Elektrotechnik delivered a coupler with exceptional design and safety for the EV segment

### CHALLENGES

BALS Elektrotechnik had specific material requirements for its charging coupler. In particular, they needed a material solution that would provide safety from external damage and would comply with global regulations.

### SOLUTION

VALOX 357XU resin, a thermoplastic alloy blend of polybutylene terephthalate (PBT) and polycarbonate from SABIC. This unfilled impact modified PBT/PC blend offers good heat and chemical resistance, excellent impact resistance even at low temperatures, and outstanding aesthetics and flow characteristics. In particular, the solution delivers:

- High mechanical properties and passing drive over test at low temperature

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## SOLUTION (continued)

- High flammability performance: V-0 at 0.75 mm, GWFI (Glow wire flammability Index) 960 °C at 1.0 mm
- High thermal properties: BPT (Ball pressure test) > 125 °C, RTIel 120 °C and passing heat aging test
- Environmental resistance: F1 certified for outdoor applications and chemical resistance against hydrocarbons and greases
- Nice surface finishing and availability of colors

## RESULTS

BALS Elektrotechnik was able to deliver an EV coupler with exceptional design that met its stringent safety requirements with VALOX 357XU resin from SABIC. In addition this material complies with norms and industry requirements for electrical distribution enclosure and power convertor's housing

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## FURTHER INFORMATION

### WEBSITES

[www.sabic.com](http://www.sabic.com)

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