

BMC COMPOSITES: HIGH VALUE METAL REPLACEMENT MATERIAL ALTERNATIVE FOR AUTOMOTIVE POWERTRAIN APPLICATIONS

Jim Cederstrom
Bulk Molding Compounds, Inc

ABSTRACT

The proliferation of plastics in automotive under the hood applications has seen continuous growth over the last 30 years and has enabled significant cost and weight savings in vehicles. Today, dramatically increased demands for improved fuel efficiency, lower emissions, and cost reduction are increasing the demand for plastics. Previously unconverted metal applications, new powertrain control systems, and alternative powertrains offer new opportunities for plastics proliferation and high value creation through component consolidation and secondary operation reductions. However, the next generation of metal conversion applications will require significantly greater physical properties in terms of temperature resistance, part tolerances, strength, and chemical resistance. BMC thermoset composites possess a unique balance of high performance properties, dimensional stability, and low cost enabling high value alternatives to metals and higher priced high performance thermoplastics.