



Metal-to-Thermoset Conversion

<p><i>Why should an Engineer switch from a Metal to a Thermoset?</i></p>	<p>Thermoset components offer a number of benefits over metal counterparts, including lower overall manufacturing costs, lower part & assembly weight, resistance to corrosion, and available molded-in tolerances, color and surface finishes.</p>
<p><i>How do Thermoset components cost less than Metal counterparts?</i></p>	<p>Thermosets offer lower tooling costs, part consolidation, and molded-in tolerances that may eliminate secondary machining processes. In raw material, metal prices have historically been much more volatile than thermoset composite prices. Additionally, thermoset product applications provide lightweighting ability.</p>
<p><i>What are industries that have benefitted from Metal-to-Thermoset conversion?</i></p>	<p>Due to the weight savings, the Automotive industry has been an early adapter of metal-to-thermoset conversions. Product applications in Electrical & Lighting industries have switched to thermosets due to superior dielectric strength and thermal insulation, and the Appliance industry has been drawn in due to higher design flexibility, part consolidation, and thermal performance.</p>
<p><i>What are common components that have been switched from a Metal to Thermoset?</i></p>	<p>Automotive: Powertrain engine & transmission components, ash cups, pulleys, thrust washers, solenoids, headlamp reflectors, & power steering components.</p> <p>Appliance: Knobs, handles, motor housings, vent trims, control panels, housings, and bases.</p> <p>Electrical/Lighting: Electrical housings & enclosures, circuit breakers, insulators, switches, relays, motor brush holders, slip rings, end caps, baffles.</p>

<p>Metal-to-Thermoset Conversion Benefits:</p>	<ul style="list-style-type: none"> • Part Consolidation • High Strength-to-Weight Ratio • Superior Electric Insulation • High Dielectric Strength • Higher Dimensional Control • Low Thermal Conductivity 	<ul style="list-style-type: none"> • Molded-in Tolerances & Color • Molded-in Surface Finishes • Resistance to Corrosion • Resistance to Heat • Resistance to UV • Low Creep
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