

Thermally Conductive Composites

Unfilled Thermoplastics typically exhibit thermally insulative properties, but conductive composites can provide heat transfer coefficients up to 10 W/mk. If electrical insulation is not required, conductivity can reach even higher values using carbon or metallic fillers. Finite Element Analysis models support that this improvement is significant as most applications are heat transfer limited by convection.

Our products provide numerous benefits over traditional metal heat sinks including design freedom, the cost advantages of injection molding, inherent corrosion resistance, and elimination of VOC's. Speak to a Conventus Polymers representative about your specific application and associated resin needs today.

Common Applications:



Motor Stator



Solenoid Components



Lighting



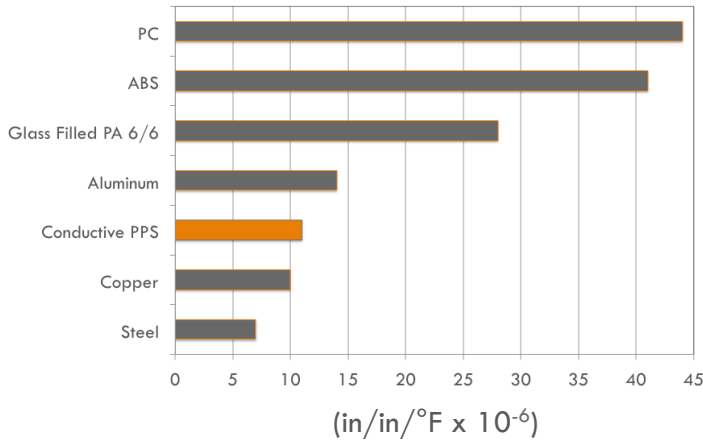
Bobbins



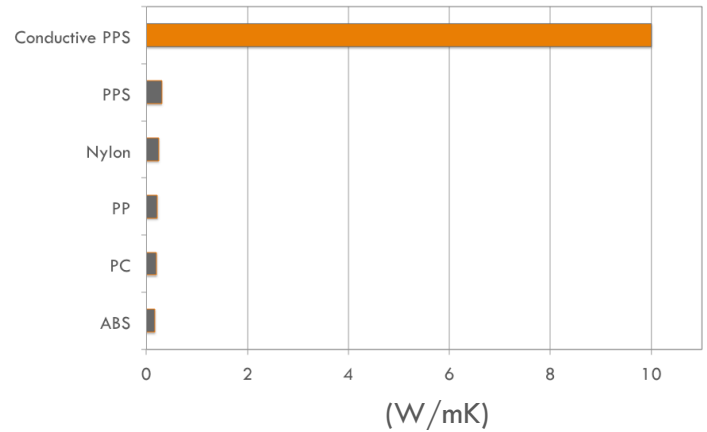
Consumer Electronics

Relative Performance:

Coefficient of Linear Thermal Expansion



Thermal Conductivity



Design Consideration:

The thermal conductivity of conductive composites can be a function of fiber orientation during molding. Often in-plane heat transfer values are higher than through-plane.

