

COOLPOLY®

THERMALLY CONDUCTIVE PLASTICS

FOR FRICTION & WEAR APPLICATIONS

CoolPoly thermally conductive injection molding grade thermoplastics are ideal for friction and wear components including automotive thrust washers and sleeve bearings.

The primary failure mechanism in polymeric friction and wear materials is polymer degradation induced by temperature rise at the frictional surface. Conventional plastic materials, including those formulated for friction and wear uses, are thermal insulators and cannot manage the frictional heat. One reason high temperature plastics are commonly used in friction and wear applications is that they better withstand the heat generation. A more engineered approach is to spread and dissipate frictional heat resulting in significantly lower surface temperatures.

CoolPoly on the left and Polyamide bearing grade on the right.



Infrared bearing demo depicting 114 second time lapse.

Friction and wear components molded from thermally conductive plastics provide:

- EXCEPTIONAL LIFE
- LOW FRICTION AND WEAR
- HIGH PV
- REDUCED OPERATING TEMPERATURE
- CHEMICAL RESISTANCE
- DIMENSIONAL STABILITY

CoolPoly E5105 and E3605 are thermally conductive injection moldable thermoplastic friction and wear compounds. They are net shape moldable or machinable for a variety of bearing applications in automotive, aerospace, food processing and other industries.