



## CoolPoly® E5109 Thermally Conductive Polyphenylene Sulfide (PPS)

CoolPoly E5109 is a thermally conductive injection molding resin based on a PPS matrix. CoolPoly E5109 is electrically conductive. Thermally conductive polymers like CoolPoly E5109 cool faster than standard injection molding grade resins.

### Typical Injection Molding Conditions

Temperature Settings	SI /Metric	English
Rear Zone	270 - 300 °C	520 - 570 °F
Center Zone	280 - 305 °C	540 - 580 °F
Front Zone	395 - 315 °C	560 - 600 °F
Nozzle	300 - 330 °C	570 - 630 °F
Melt	305 - 330 °C	585 - 630 °F
Mold	135 - 180 °C	275 - 350 °F

### Pressure Settings

Injection	6.2073 - 13.8 MPa	900 - 2000 psi
Hold	2.1 - 6.9 MPa	300 - 1000 psi
Back	0.2 - 0.7 MPa	25 - 100 psi

### Injection Settings

Fill	slow - moderate	slow - moderate
Screw	50 - 150 rpm	50 - 150 rpm
cushion	0.5 - 1.3 cm.	0.2 - 0.5 inch.

### Drying Conditions

Time & Temperature	4-6hrs @ 150 °C	4-6hrs @ 300 °F
Dew Point	-40 °C	-40 °F
Moisture Content	0.1%	0.1%

### Additional Information

A Screw compression ratio 2.5 or less is recommended.

A reverse taper nozzle is recommended.

A mold surface temperature between 190F and 275F should be avoided as parts will have a varying degree of crystallinity leading to poor dimensional and long-term thermal stability.

If voids or porosity are forming, dry material and reduce injection speed.

Longer hold times may also be necessary to ensure full part density and eliminate voids.

A2 or D2 mold steel is recommended (Rc 60 or higher).