



CoolPoly® D5112 Thermally Conductive Polyphenylene Sulfide (PPS)

CoolPoly D5112 is a thermally conductive injection molding resin based on a polyphenylene sulfide (PPS) matrix. CoolPoly D5112 is electrically insulative. Thermally conductive polymers like CoolPoly D5112 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	380 - 305 °C	540 - 580 °F
Front Zone	295 - 315 °C	560 - 600 °F
Nozzle	299 - 330 °C	570 - 630 °F
Melt	307 - 330 °C	585 - 630 °F
Mold	135 - 280 °C	275 - 350 °F

Pressure Settings

Injection	60 - 165 MPa	9000 - 24000 psi
Hold	40 - 105 MPa	6000 - 15000 psi
Back	0.2 - 0.5 MPa	25 - 75 psi

Injection Settings

Fill	moderate - fast	moderate - fast
Screw	50 - 150 rpm	50 - 150 rpm
cushion	.5 - 1.3 cm.	.2 - .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).

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