



CoolPoly® E3603 Thermally Conductive Polyphthalamide (PPA)

CoolPoly E3603 is a thermally conductive injection molding resin based on a polyphthalamide (PPA) matrix. CoolPoly E3603 is electrically conductive. Thermally conductive polymers like CoolPoly E3603 cool faster than standard injection molding grade resins.

Typical Injection Molding Conditions

Temperature Settings	SI /Metric	English
Rear Zone	280 - 310 °C	540 - 590 °F
Center Zone	300 - 315 °C	570 - 600 °F
Front Zone	305 - 325 °C	580 - 620 °F
Nozzle	290 - 315 °C	550 - 600 °F
Melt	310 - 325 °C	590 - 620 °F
Mold	107 - 163 °C	225 - 325 °F

Pressure Settings

Injection	6.9 - 10.3 MPa	1000 - 1500 psi
Hold	3.45 - 6.9 MPa	500 - 1000 psi
Back	0 - 0.35 MPa	0 - 50 psi

Injection Settings

Fill	moderate - fast	moderate - fast
Screw	50 - 150 rpm	50 - 150 rpm
cushion	0.63 - 1.27 cm.	0.25 - 0.5 inch.

Drying Conditions

Starting Moisture Content			
0.05-0.2%	2-4 hrs @	80 °C	2-4 hrs @ 175 °F
0.2-0.5%	4-8 hrs @	80 °C	4-8 hrs @ 175 °F
>0.5% or unkown	-24 hrs @	104 °C	12-24 hrs @ 220 °F
Dew Point		-40 °C	-40 °F

Additional Information

- A low compression screw (less than 2.5:1) is recommended.
- Due to drool a reverse taper nozzle is suggested
- During startup raise nozzle temperature until process stabilizes to help prevent initial nozzle freeze-off
- E3603, when shipped in 55 lb bags or Gaylords, is packaged at a maximum moisture content level of 0.1%.
- Material should be dried to a moisture content level of .05% or less prior to injection molding.
- Material is moisture sensitive. During processing use of a preheated desiccant dryer 175F is advised to keep material dry.
- Immediately close and seal any bag or container of unused material.

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