

ZEONEX® 5000

Injection Molding Guide

Molding Guide

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ZEONEX 5000 can be processed using standard molding practices with conventional injection molding equipment. The following molding guidelines are typical mid-point ranges for the material when processing with 80-120t class machine.

Contact ZEON for more detailed information regarding processing, material flow characterization, or design considerations for ZEONEX 5000.

ZEONEX 5000	
Resin Preheat	4-12hr, 50°C
Mold Temperature	40-60°C
Barrel Temperatures	
Nozzle	210-250°C
Meter	230-270°C
Melt	220-260°C
Feed	190-250°C
Melt Temperature	230-270°C
Injection Speed	30-80cm ³ /s
Screw Speed	20-40rpm
Back Pressure	50-100kgf/cm ²
Typical Mold Shrink	0.1-0.3%
Pack Pressure:	
It is recommended to use the minimal amount of pack pressure required to obtain correct part dimension. High pack pressure should be avoided in order to reduce mold stress and optical birefringence.	
Nitrogen Sealing:	
Nitrogen sealing at the injection feed throat is recommended to reduce chance of degradation during long residence time processes and to maintain the high optical qualities of COP.	
Purge Recommendation:	
Conventional olefin-type purge materials are suitable for use with COP. In order to minimize the chance for contamination, ZEON recommends to mechanically clean the screw and barrel components prior to molding COP.	
Tooling Consideration:	
COP resin has an affinity to chrome and nitriding steel coatings; use of these materials on barrel, screw, or mold components should be avoided to reduce chance of resin or part sticking.	

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