

POLYPROPYLENE PROCESSING PARAMETERS (HOMOPOLYMER AND COPOLYMER)

General Recommendations:

- Reciprocating screw machines
- General purpose screw
- Flow through nozzle
- Reverse taper nozzle
- High hardness tool
- Optimal shot size: 40-60% of barrel capacity
 - Should never be greater than 75% of barrel capacity

Drying Conditions:

- 2-3 hours at 170° F in an oven or hopper dryer is recommended for optimal surface finish, however drying is not required

Injection Speed and Injection Pressure:

- To obtain the best possible surface finish, a moderate to fast injection speed is recommended. With glass and mineral filled materials, fast injection speeds are recommended. To achieve 95% mold fill of the part during the first injection state, a minimum injection pressure should be utilized and hold pressure should be 30 - 75% of the initial pressure.

Processing Conditions:

- Melt Temperature 460° F - 500° F
- Target Temperature 475° F
- Mold Temperature 80° F - 120° F
- Target Temperature 100° F
- Cylinder Temperature 450° F - 510° F
- Back Pressure 50-100 psi
- Screw Speed 30-60 RPM
- Target Screw Speed 50 RPM
- Hold Pressure 30-75% of the injection pressure
- Cycle Time
 - Varies with part size and mold temperature

Use of Regrind:

- It is not recommended to use more than 20% of regrind material and expect slight decreases in mechanical properties when it is utilized.