

## POLYCARBONATE PROCESSING PARAMETERS

### 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:

- 4 hours at 250°F in a dehumidifying oven or hopper dryer is optimal
- Material should be dried to a 0.04% moisture level

### 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 580° F - 620° F
- Target Temperature 600° F
- Mold Temperature 180° F - 250° F
- Target Temperature 210° F
- Cylinder Temperature 580° F - 655° 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.