

## PROCESSING GUIDE

**HANDLING**

Polycarbonate resins readily absorb moisture from the atmosphere. Reseal opened containers as soon as possible. To avoid condensation on the resin during cold weather, material should be stored in unopened containers at room temperature for at least 24 hours.

**PRE-DRYING**

All polycarbonate resins should be thoroughly dried prior to molding. Mechanical properties and glass-fiber adhesion will be dramatically reduced if dried improperly. Recommended drying conditions are 4 – 5 hours at 250°F (121°C) in dehumidified air supplied by a desiccant dryer. Return air filters should be checked regularly to insure proper air flow. Regeneration temperatures and bed rotation should also be monitored. Dewpoint meters should register -40°F. DO NOT dry in excess of 24 hours.

**MOLD SURFACE TEMPERATURE**

High mold temperatures generally produce high luster on parts molded from polycarbonate, with lower molded-in stress. Due to the glass content, however, surface quality will be limited. Mold surface temperatures should be maintained within a range of 170-210°F (77-99°C), with the higher end selected for thinner parts.

**MOLDING TEMPERATURES**

Stock melt temperatures should be kept within a range of 530-580°F (277-304°C), with best results normally obtained in the middle. Shot size, part geometry, residence time, and cooling patterns should all be considered.

Recommended zone settings are as follows:

<b>REAR</b>	510-530°F	(266-277°C)
<b>MIDDLE</b>	520-540°F	(271-282°C)
<b>FRONT</b>	530-560°F	(277-293°C)
<b>NOZZLE</b>	540-570°F	(282-299°C)

**MACHINE SETTINGS**

Polycarbonate generally requires moderate injection speeds and pressures. Glass fibers produce a stiffer melt flow, and small diameter gates (submarine, tunnel, pin-point) may be difficult to fill. Lower screw speed, 30-60 RPM, and low to moderate back pressure, 25-75 psi, should be used to avoid shear breakage of glass fibers and resulting physical property losses.



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