

INJECTION MOLDING PROCESSING GUIDE- RIGID PVC COMPOUND

GENERAL INFORMATION

This processing guide is meant to provide general information for the injection molding of rigid PVC compounds. Westlake rigid PVC compounds can be tinted on-line with color concentrates; however, it is recommended that the concentrates use PVC as a carrier resin.

EQUIPMENT

Screws

A general purpose low compression screw is recommended with a compression ratio of 2.0 to 2.2.

Screw rotation should be just fast enough so that screw recovery (shot refill) happens approximately 2 seconds before mold opening.

Back Pressure

Back pressure should be in the range of 50 psi-150 psi.

Pack and Hold Pressure

Set at 7,000- 14,000 psi or slightly greater than half of the injection pressure to avoid sink marks in the part. Holding time should be between 2 and 4 seconds or just enough time for the gates to freeze.

Injection Speed

Start out at ~ 25 % of maximum and gradually speed up to between 50% and 75%. Injection pressures can run between 12,000 - 20,000 psi.

TEMPERATURE PROFILE

Melt Temperature

395°F – 410°F should be obtained using a combination of barrel heats, back pressure, and screw rpm shear heat.

Mold Temperature

Mold cooling temperature should be between 60°F-120°F.

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Barrel Heat

Barrel heat should be set below the ideal processing melt temperature with a graduating profile from low, at the hopper zone, to a higher value at the metering zone nearest the nozzle.

Zone 1 (°F)	Zone 2 (°F)	Zone 3 (°F)	Nozzle (°F)
320-340	330-350	340-360	340-350

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