

PROCESSING GUIDE FOR INJECTION MOLDING OF RIGID PVC PELLETS

EQUIPMENT & CONDITIONS	SUGGESTIONS
Compound Drying	Typically not necessary. 120°F for 2 -3 hours if desired.
Color Concentrate Type	PVC-based color concentrates
Machine Type	Typical horizontal or vertical PVC injection molding equipment. Stainless grade 420 or Chromed tooling is recommended.
Screw Design	General purpose screw. Smear tip is recommended but a check ring can be used for thin wall parts. Ball type check valve is not recommended.
Compression Ratio	2:1 to 3:1
L/D Ratio	20:1 to 24:1
Gates	High viscosity of material should be considered to reduce shear. Hot runner systems are not recommended.
Venting	Required at final fill points. Typical .0005 - .003”H x 0.2”W
Mold Cooling	Water cooling & temperature control for uniform heat removal Typical range 80 - 130°F
Shot Size	At least 20% of the overall shot capacity to reduce dwell time
Clamping Force	2.5 - 3 tons per square inch
Linear Shrinkage	0.05 - 2.0%
Injection Pressure	Determined by cavity fill properties and part weight
Injection Rate	Slow to Moderate
Back Pressure	50 - 150 psi
Hold Time	Varies

EQUIPMENT & CONDITIONS

SUGGESTIONS

Machine Temperatures

Typical Barrel Settings	Melt Temperature Range
285 - 360°F	380 - 395°F

**Melt temperature should be measured using a hand held pyrometer

Purging

Use Acrylic, Polystyrene or HD polyethylene

Regrind

Recyclable; mix up to 20% regrind with virgin

Additional Considerations

Care must be exercised to avoid excessive temperatures or delays during the molding process; material must not sit for more than 15 minutes under any circumstances.

Mold care is extremely important. At the conclusion of a production run, the mold should be neutralized to remove any residual hydrochloric acid and then treated with a high quality mold preservative/rust inhibitor.

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North America

505 Central Avenue
Pawtucket, RI 02861
+1-401-725-8000
1-800-554-9892

Singapore

41 Shipyard Road
Singapore 628134
+65-62652544

China

Room 1003,
Lujiazui Finance Plaza
No. 1217, Dongfang Road
Pudong, Shanghai 200127
+86-21-50108083