

PROCESSING GUIDE FOR INJECTION MOLDING OF APEX™ FLEXIBLE PVC COMPOUNDS

EQUIPMENT & CONDITIONS	SUGGESTIONS
Compound Drying	Typically not required.
Color Concentrate	PVC-based color concentrate.
Machine Type	Typical PVC injection molding equipment. Stainless steel grade 420 or chromed tooling.
Screw Design	General purpose screw - chrome plated.
Compression Ratio	2:1 to 3:1
L/D Ratio	20:1 to 24:1
Gates	Liberal gating due to shear and thermal sensitivity of PVC.
Venting	Required at final fill points.
Ejection	Varies
Mold Cooling	Water cooling & temperature control for uniform heat removal. Typical range 50°F - 110°F.
Shot Size	At least 50% of the overall shot capacity.
Linear Shrinkage	0.010 to 0.025 inches/inch.
Injection Pressure	Determined by cavity fill properties and part weight.
Injection Rate	Moderate
Back Pressure	50 - 150 psi
Hold Time	Varies

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EQUIPMENT & CONDITIONS

SUGGESTIONS

Machine Temperatures

Hardness Range	Typical Barrel Settings	Melt Temperature Range
Shore A50 - 60	255°F - 310°F	325°F - 335°F
Shore A60 - 70	265°F - 315°F	335°F - 345°F
Shore A70 - 80	280°F - 320°F	345°F - 355°F
Shore A80 - 90	300°F - 350°F	355°F - 365°F
Shore C70 - 80	335°F - 375°F	375°F - 385°F
Shore C80 - 90	350°F - 385°F	380°F - 390°F

**Melt temperature should be measured using a pyrometer on the material exiting the nozzle.

Purging

If necessary, use HD polyethylene.

Regrind

Recyclable; mix up to 20% regrind with virgin.

Additional Considerations

PVC compounds are thermal and shear sensitive materials. Care must be exercised to avoid excessive temperatures or delays during the molding process; material must not sit for more than 10 minutes under any circumstances.

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