

ACRYLIC (PMMA) INJECTION MOLDING

PROCESSING GUIDE INFORMATION

EQUIPMENT & CONDITIONS	SUGGESTIONS
Compound Series	WG 8000
Compound Drying	Dessicant type dryer 4 hours at 180°F (82°C) Hot air type dryer 4 hours at 170°F (77°C) Moisture to be below 0.02% Moisture should be checked with a moisture analyzer to confirm moisture level.
Color Concentrate	Are not recommended as there will already be color in the compound.
Machine Type	Traditional horizontal or vertical Injection Molding Machine
Screw Design	General purpose screw, chrome plated, standard check ring 50% feed, 25% compression, 25% metering
Compression Ratio	1.8-3.2:1
L/D Ratio	20:1 minimum
Gates	As large as possible
Venting	.05mm to .07mm deep and 6mm wide
Mold Cooling	Water or oil mold circulation fluid at 140-190°F (60-90°C)
Shot Size	30-40%
Clamping Force	3-4 tons per square inch Runners should be included in the tonnage calculation
Linear Shrinkage	0.2-0.6% .004" - .007" in/in
Injection Pressure	10-30,000 PSI
Injection Rate	Slow to Medium
Back Pressure	100-200 PSI
Hold Time	Varies based on part design

EQUIPMENT & CONDITIONS

SUGGESTIONS

Machine Temperatures

Melt Temp 205-230°C (use melt probe to determine actual melt temperature)
Rear 175-195°C
Center 195-205°C
Front 205-230°C
Nozzle 205-230°C

Purging

Asaclean, Dyna-Purge and Ultimax or another purge designed for acrylic

Regrind

Regrind percentage needs to be determined by the customer after testing for “fitness of use”
Regrind must be treated like virgin compound and dried properly

Additional Considerations

Acrylic is hygroscopic and must be dried properly to avoid processing and aesthetic defects. We recommend that TA is contacted before setting up the final conditions.

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