CELCON® M90 Acetal (Natural) Process Sheet

# 1. Drying (if needed)

• Recommended? Generally not required, since Acetal is not hygroscopic. However, drying may help if handling or regrind suggests moisture risk.  
• Drying Conditions: ~180 °F (80 °C) for 3–4 hours.

# 2. Injection Molding Settings

• Melt / Processing Temperature: Preferred 360–390 °F (182–199 °C). Absolute maximum 450 °F (230 °C).

• Barrel (Zone) Temperatures:  
 - Rear: 338–356 °F (170–180 °C)  
 - Middle: 356–374 °F (180–190 °C)  
 - Front: 356–374 °F (180–190 °C)  
 - Nozzle / Injection Zone: 374–392 °F (190–200 °C)

• Mold Surface Temperature:  
 - Standard: 180–200 °F (82–93 °C)  
 - For thick sections: cooler molds ~150 °F (65 °C), or as low as 80 °F (27 °C) for very thick parts  
 - For reduced stress / high surface finish: up to 250 °F (120 °C)

# 3. Additional Process Notes

• Melt Temperature Capability: 356–374 °F (180–190 °C)  
• Flow Temperature (lower bound): ~345 °F (174 °C)  
• Safety Limits: Never exceed 460 °F (238 °C). Do not keep above 380 °F (193 °C) for more than 15 minutes without purging to prevent discoloration and formaldehyde release.

# 4. Summary Table (°F)

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| Parameter | Range |
| Drying temperature (if used) | ~180 °F for 3–4 hours |
| Melt / Processing temp. (typical) | 360–390 °F |
| Melt max (absolute limit) | 450 °F |
| Barrel zones (rear to nozzle) | 338–392 °F |
| Mold surface (typical) | 180–200 °F |
| Mold surface (thick parts) | ~150 °F or as low as 80 °F |
| Mold surface (stress/high gloss) | Up to 250 °F |
| Safety max heating | Never >460 °F; purge if >380 °F for >15 min |