

Naturacell™ MOLDING and EXTRUSION CONDITIONS

With extraordinary physical properties and versatile processing conditions, Naturacell is a practical green polymer that's ideal for thousands of consumer products.

MOLDING CONDITIONS BARREL TEMP STARTING PROFILE

FLOW	MSS	MS	M	MH	H	H2	H3
Rear	320°- 350°F	340°- 360°F	360°- 380°F	380°- 400°F	400°- 420°F	420°- 450°F	450°- 470°F
Center	320°- 350°F	340°- 360°F	360°- 380°F	380°- 400°F	400°- 420°F	420°- 450°F	450°- 470°F
Front	320°- 350°F	340°- 360°F	360°- 380°F	380°- 400°F	400°- 420°F	420°- 450°F	450°- 470°F
Nozzle(1)	340°- 360°F	360°- 380°F	380°- 400°F	390°- 400°F	410°- 430°F	430°- 460°F	460°- 480°F

PRESSURES

FLOW	MSS	MS	M	MH	H	H2	H3
MOVEABLE HALF	1100 / 950 PSIG	1200 / 1000 PSIG	1300 / 1100 PSIG	1400 / 1100 PSIG	1500 / 1200 PSIG	1600 / 1200 PSIG	1700 / 1300 PSIG
BACK PRESSURE	0-50 PSI	0-50 PSI	0-50 PSI	0-50 PSI	0-50 PSI	0-50 PSI	0-50 PSI

EXTRUSION CONDITIONS

Extrusion(4)	340°- 360°F	350°- 370°F	360°- 380°F	370°- 390°F	380°- 410°F	390°- 420°F	400°- 420°F
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Mold Temperatures (2) SOFT FLOWS BELOW MS 100°F - 140°F It is preferred to use desiccant dryers between 160°F and 170°F for 2 to 3 hours for
HARDER FLOWS 100°F - 180°F molding drying and between 150°F and 170°F for 3 to 5 hours for extrusion drying
Cycle Times INJECTION (3) 8 - 12 sec. with a dew point between -20°F and -40°F. Too low a temperature or time will not
BOOSTER 6 - 12 sec. sufficiently dry the material. In the absence of a desiccant dryer, the injection mold-
CURE 40 - 70 sec. ing machine hopper may be used. Tray dryers may also be used.

TOOLING: The mold vent for the tool should be 0.002" to 0.003". If this is not the case, mold temperatures could be elevated to help drive off the volatiles thereby reducing surface blushing. (180°F - 220°F) Mold Temp. Regulation:
Most molding thermolators use hot water as their medium. In the case of elevated mold temperatures as shown above, oil thermolators should be used as they can achieve high temperatures of 220°F and higher without turning to steam.

- (1) Use straight flow through or reverse nozzle. Nozzle orifice should be 1/16" smaller than sprue orifice at end of mold.
- (2) Do not exceed 160°F without oil medium. Higher mold temps may be used to burn off surface plasticizer. Use thermolator to heat mold or clean water (just cracked). Never use a chiller.
- (3) Injection time may be increased; it depends on the part thickness, part size, and number of cavities.
- (4) Typical initial temperatures for a single-screw 32:1 compounding extruder.

ROTUBA EXTRUDERS

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