Polifil® NYLON

Handling

Nylon resins absorb moisture from the atmosphere. Reseal opened containers as soon as possible. To avoid condensation on the resin during cold weather, material should be stored in unopened containers at room temperature for at least 24 hours.

Pre-Drying

Nylon resins generally should be dried prior to molding. Recommended drying conditions are 2 hours at 220°F (104°C). A dehumidified air (dessicant) dryer is recommended but simple hot air dryers may also be used. Return air filters should be checked regularly to insure proper air flow. DO NOT dry in excess of 12 hours or discoloration and property deterioration will result.

Mold Surface Temperature

Higher mold temperatures generally produce higher luster on parts molded from Nylon, with lower molded-in stress. Glass reinforced grades require higher mold temperatures to yield good surface appearance. Mold temperatures range from 100-200°F (38-93°C), with the lower ranges for non-critical parts and general purpose resins, and the higher ranges for mineral and glass reinforced grades and critical appearance applications.

Molding Temperatures

Molding temperatures should be selected based upon the type of Nylon molded. Shot size, part geometry, residence time, and cooling patterns should all be considered.

Recommended zone settings are as follows:

	NYLON 6/6	NYLON 6	NYLON 6/12
REAR	550°F (288°C)	480°F (249°C)	480°F (249°C)
MIDDLE	525°F (274°C)	520°F (271°C)	520°F (271°C)
FRONT	540°F (282°C)	540°F (282°C)	540°F (282°C)
NOZZLE	550°F (288°C)	540°F (282°C)	540°F (282°C)
MELT	540-580°F (282-304°C)	530-560°F (277-293°C)	530-560°F (277-293°C)

Machine Settings

Nylons are crystalline resins with low viscosity and fast cooling characteristics. Where mold design allows, fast injection speeds should be used to maximize appearance and limit molded-in stresses. Packing pressure must be maintained until the gate solidifies (or until the part is solidified for hot drops) or excessive warp and sink marks will result. Slow to moderate screw speed, 30-60 RPM, and low to moderate back pressure, 25-75 psi, is appropriate, with the lower end selected for glass reinforced grades.