Polifil® Reprocessed High Impact Polystyrene

Handling

Polystyrene does not absorb large amounts of moisture, however pellets can hold surface moisture. 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

Polystyrene used for parts requiring excellent surface appearance should be dried prior to molding. Recommended drying conditions are 2 hours at 160°F (71°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 polystyrene, with lower molded-in stress. Mold surface temperatures should be maintained within a range of 100-150°F (38-66°C) for most applications. Cooler mold temperatures may be used where part surface appearance is not important.

Molding Temperatures

Stock melt temperatures should be kept within a range of 425-475°F (218-248°C), with best results normally obtained in the middle. Shot size, part geometry, residence time, and cooling patterns should all be considered.

Recommended zone settings are as follows:

REAR	400-420°F	(204-216°C)
MIDDLE	410-430°F	(210-221°C)
FRONT	430-450°F	(221-232°C)
NOZZLE	430-450°F	(221-232°C)

Machine Settings

Polystyrene generally requires moderate injection speeds and pressures. Excessive injection speeds will produce shear-related streaks or “jet marks” at gates. Due to low shrinkage of polystyrene, an amorphous plastic, packing times can be relatively short. Use moderate screw speeds and back pressure for plastication.

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