NETWORK POLYMERS, INC.

SBS 1000

Styrene Butadiene Copolymer

RECOMMENDED PROCESSING GUIDELINES

INJECTION MOLDING

Drying: SBS 1000 is not moisture sensitive and although minimal amounts of moisture will be picked up over time, it is generally not necessary to dry the material before injection molding.

Processing Conditions: Typical starting conditions for a reciprocating screw injection-molding machines are as follows:

		°F	°C
Barrel temperatures:			
	Zone 1 (Feed Throat)	**340**	**170**
	Zone 2 (Compression)	**360**	**180**
	Zone 3 (Metering)	**375**	**190**
	Nozzle	**400**	**205**
Mold Temperature:		**80**	**27**
Injection Pressure, psig:		**1100**	
Back Pressure, psi:		**90**	
Injection Speed, in/sec:		**0.5**	
Screw Speed:		**200**	

NOTE: Excessive barrel or melt temperatures or long residence times in barrel can cause material to yellow causing finished part color shifts. Mold temperature is dictated by part and mold design.

Screw Design: Most general screw designs will work with this material. Avoid harsh mixing type screws that may cause material degradation. Screw speed should be slow and adjusted to allow complete rcovery just prior to mold opening. Maintain a cushion of 1/8th" or less after injection to provide good dimensional reproducibility and weld line integrity.

Shot weight: 40-80% of rated barrel capacity. Barrel temperatures may need to be modified to adjust for differences from the recommenced shot size versus barrel capacity ratio. Long residence times in the barrel should be avoided.

Injection pressure: Is dependent on part size and mold design. An injection pressure which is too low may result in sink marks; while if too high, demolding may be more difficult and/or flash may occur. Typical tandard injection pressures range between 600 and 1100 psi.

Injection Velocity: Dictated by mold and part design. Generally medium to fast fill speeds.

Back Pressure: 75-150 psi is generally sufficient to insure a consistent shot density to mix material and colorants well. Excessive back pressure can cause higher melt tempteratures and cause material degradation.

Purge: Use Polystyrene to purge machine to nsure a clean machine.

NOTE: SBS-1000 thermoplastic resin can typically be procesed using a melt temperature of 450F at the absolute maximum. The above values are intended for use only as guidelines; optimum conditions will very from machine to machine.

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