Equipment & Suggestions

Compound Drying	This series of TPVs will absorb moisture which may result in material degradation, therfore requires drying before use. Use a desiccant dryer for a minimum of 3 hours at 180°F.
Colorant	Polyolefin-based concentrates
Barrel	Use a barrel that utilizes 30 to 80% of the maximum shot capacity to provide good homogenization and adequate time for heat soaking.
Gate Information	Cylindrical or trapezoidal
Runner Design	Trap / Full Round
Venting	Recommended
Shot Size	At least 50% of the overall shot capacity
Use of Regrind	100% Recyclable; use up to 20% regrind with virgin material
Purging	Olephinic compounds

Start-Up Conditions

Injection Pressure	Determined by several factors; see back side for details
Injection Rate	Fast
Pack & Hold Pressure	40 to 60% of injection pressure
Back Pressure	Starting Point: 25 to 150 psi
Screw Speed	Starting Point: 25 to 75 rpm

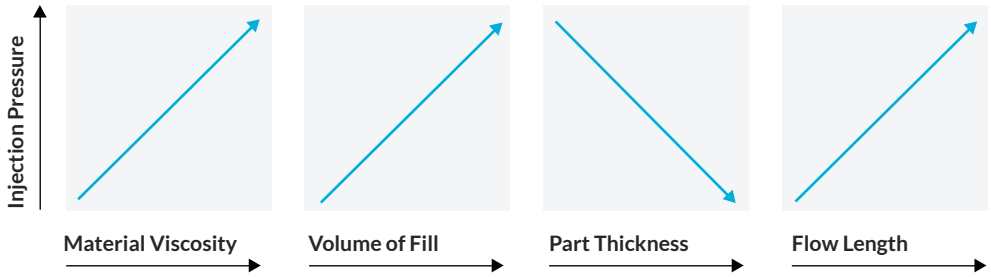
Temperature Settings

Zone 1 - Feed	280 to 320°F	138 to 160°C
Zone 2 - Compression	330 to 380°F	166 to 193°C
Zone 3 - Metering	350 to 440°F	177 to 227°C
Zone 4 - End Cap	360 to 440°F	182 to 227°C
Zone 5 - Nozzle	360 to 440°F	182 to 227°C
Melt	360 to 440°F	182 to 227°C
Mold	60 to 130°F	16 to 54°C

These parameters are for a typical machine of generic design. The actual parameters may vary depending on your specific injection molding equipment and part design.

Helpful Hints for Injection Molding Sarlink TPVs

Mold Temperature	Thin-walled parts require higher mold temperatures to prevent premature freeze-off. Parts with thick walls tend to use lower mold temperatures to prevent excessive cycle times. However, reducing mold temperature for thick-walled parts has a minor effect on cooling times, as cooling is primarily a function of part thickness. The only affect mold temperature has on part quality is gloss level. Cooler tools make parts that appear glossy.
Zone 1 - Nozzle **Zone 2 - End Cap**	Set the temperature to the desired melt temperature. This section of the barrel should neither add nor remove heat from the melt; it is simply a heat soak area where the material waits for injection during the next cycle.
Zone 3 - Metering	Designed to mix and shear heat the material, this zone should be set to about 10°F (6°C) lower than the desired melt temperature. The intense shear heating may increase temperature by 10 to 20°F (6 to 11°C) in this region.
Zone 4 - Compression	In this zone, the screw flights gradually decrease in channel depth. This compression forms a melt bed of molten material that separates from the solid pellets. Keep this zone about 20°F (11°C) cooler than Zone 3.
Zone 5 - Feed	Set the temperature to 30°F (17°C) below Zone 4 to prevent premature melting, which could lead to bridging (pellets stick together at the feed throat and prevent proper feeding).
Melt Temperature	Sarlink compounds have wide processing windows, howerver part aesthetics and physical properties are highly dependent on melt temperature.
Injection Rate	Injection rate should be as fast as possible to achieve shear thinning of the material. Rate is dependent on the type and size of gate used.
Pack & Hold Pressure	For these materials, 95 to 99% of the mold should be filled using injection pressure and then transferred to pack and hold. This compresses the melt and aids in eliminating sinks and voids in thick sections of the part, as well as compensates for volumetric shrinkage.
Back Pressure & Screw Speed	These parameters work together to create a good, homogenized melt. Faster screw speed requires increased back pressure to prevent solid gels from contaminating the melt.
Injection Pressure	Injection pressure depends on the following factors: 1. Material - viscosity, solidification point, shear sensitivity 2. Volume - part(s), runner(s), sprue 3. Thickness - part, cross section of gate(s), runner(s), and sprue 4. Flow length - from the nozzle to the rear opening to the end of the fill



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