INEOS ABS

Lustran® ABS 349

Product Description

Lustran ABS 349 is a high-gloss, medium-impact injection molding resin that has been specially formulated for excellent surface lubricity using internal additives.

*Typical Properties**	*Cond.*	*Units*	*Value*	*ASTM*
Tensile Stress @ Yield	73°F	psi	6,100	D638
Tensile Modulus	73°F	psi	380,000	D638
Flexural Stress @ Yield	73°F	psi	10,500	D790
Flexural Modulus	73°F	psi	390,000	D790
Izod Impact, notched	73°F	ft.-lb./in	5.0	D256
1/8" x 1/2" bar	-40°F	ft.-lb./in.	-	
Hardness – Rockwell	73°F	R	110	D785
Specific Gravity	73°F		1.05	D792
Deflection Temperature Under Load, 1/2" x 1/2" bar				D648
Unannealed	264 psi	°F	190	
	66 psi	°F	-	
Annealed	264 psi	°F	-	
	66 psi	°F	-	
Vicat Softening Point	1 kg	°F	220	D1525
Melt Flow**	230/3.8	g/10 min	6	D1238
Coefficient of Linear Expansion		in./in./ °F	4.5×10^{-5}	D696
Mold Shrinkage		in./in.	0.004 – 0.006	D955

Injection Molding Guidelines for Lustran® ABS 349 (1)

Actual conditions used for processing will depend on machine size, mold design, material residence time and shot size. Pre-drying is recommended.

Stock Temperature (2)	**475 – 525°F**
Drying Conditions (3)	**2 hours @ 180 – 190°F**
Back Pressure	**0 – 25 psi**
Screw Speed	**Moderate**
Mold Temperature (4)	**80 – 150°F**
Injection Rate	**High**
Cushion (5)	**0.125" max**
Screw Delay	**To minimize residence (6)**

(1) A reciprocating screw injection molding machine is preferred. A general purpose screw with a 2.5:1 compression ratio is suggested. A minimum L/D of 20:1 will insure melt homogeneity.

(2) Use minimum stock temperature with minimum barrel residence time, consistent with good part quality. Measure stock temperature with pre-heated, hand-held pyrometer.

(3) Pre-drying is recommended in a dryer with circulating, dehumidified hot air. The inlet air dewpoint should be -20°F or below. Drying for 4 hours at 160 – 170°F is also adequate.

(4) Mold temperature of 110 – 150°F is recommended for development of maximum gloss and strength.

(5) Maintain ram forward (Packing) time at minimum required to control sink marks.

(6) To avoid excessive residence time, volume and weight of shot should be balanced against barrel capacity and injection stroke. A shot weight-to-machine capacity ratio of 0.5 to 0.75 is recommended.