



Estaloc® 59300 RETPU

Lubrizol Advanced Materials, Inc. - Thermoplastic Polyurethane Elastomer (Polyester)

Wednesday, November 6, 2019

General Information

Product Description

Type: Estaloc® 59300 RETPU is a Polyester-Type Reinforced Engineered Thermoplastic (RETPU).

Features: Fast Cycling, Dimensional Stability, Durability, Aesthetics, Low Temperature Impact

Uses: Injection Molding

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Filler		
Features	• Durable • Fast Molding Cycle	• Good Dimensional Stability • Good Surface Finish	• Low Temperature Impact Resistance
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.45		ASTM D792
Molding Shrinkage - Flow			ASTM D955
-- ²	1.0E-3	in/in	
-- ³	4.0E-4	in/in	
Molding Shrinkage - Across Flow ²	1.0E-3	in/in	ASTM D955
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus (0.0300 in)	537000	psi	ASTM D638
Tensile Strength (0.0300 in)	12000	psi	ASTM D638
Tensile Elongation (Break, 0.0300 in)	20	%	ASTM D638
Flexural Modulus (0.0300 in)	421000	psi	ASTM D790
Flexural Strength (0.0300 in)	13100	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°F, 0.0300 in	2.4	ft·lb/in	
73°F, 0.0300 in	8.1	ft·lb/in	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 5 sec)	72 to 78		ASTM D2240

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	219	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Rear Temperature	410	°F

Estaloc® 59300 RETPU

Lubrizol Advanced Materials, Inc. - Thermoplastic Polyurethane Elastomer (Polyester)

Injection	Nominal Value	Unit
Middle Temperature	430	°F
Front Temperature	435	°F
Nozzle Temperature	450	°F
Processing (Melt) Temp	450	°F
Injection Pressure	10000 to 14900	psi
Injection Rate	Slow-Moderate	
Holding Pressure	5080 to 10000	psi
Back Pressure	50.0	psi
Screw Speed	30 to 80	rpm

Injection Notes

Air Dew Point: -40°C

Notes

¹ Typical properties: these are not to be construed as specifications.

² Disc

³ Flex Bar