



Estaloc® 59104 RETPU

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

Wednesday, November 6, 2019

General Information

Product Description

Type: Estaloc® 59104 RETPU is a Polyester-Type Reinforced Engineering Thermoplastic (RETPU).

Features: Fast cycling, dimensional stability, durability, aesthetics, low temperature impact

Uses: Injection Molding

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Filler / Reinforcement	• Filler		
Features	• Durable • Fast Molding Cycle • Good Adhesion	• Good Dimensional Stability • Good Processability • 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	1.31		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (0.0300 in)	5800	psi	ASTM D638
Tensile Elongation (Break, 0.0300 in)	40	%	ASTM D638
Flexural Modulus (0.0300 in)	175000	psi	ASTM D790
Flexural Strength (0.0300 in)	6820	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			ASTM D256
-40°F, 0.0300 in	5.5	ft-lb/in	
73°F, 0.0300 in	13	ft-lb/in	
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 5 sec)	65 to 71		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	203	°F	ASTM D648
Deflection Temperature Under Load 264 psi, Unannealed	142	°F	ASTM D648

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
Middle Temperature	419	°F
Front Temperature	430	°F

Estaloc® 59104 RETPU

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

Injection	Nominal Value	Unit
Nozzle Temperature	441	°F
Processing (Melt) Temp	441	°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.