

Lubrizol ESTALOC® 59600 Ester-Type, Reinforced Engineering Thermoplastic (European Grade)

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Glass Filled

Material Notes:

Description: Estaloc® RETP (Reinforced Engineering Thermoplastic) is a tough, dimensionally stable, abrasion-resistant thermoplastic that withstands demanding environments. Developed as an extension to the Noveon Estane® TPU technology, Estaloc® RETP products complement Estane's durability and aesthetics with increased stiffness capability and dimensional stability over a broad temperature performance range not available from other engineering thermoplastics. Major Benefits of Estaloc® RETPs: Superior Dimensional Stability approaching that of metals Class A surface aesthetics Paintability with no primer nor adhesion promoter Excellent abrasion and scuff/mar resistance Toughness over a broad temperature range Excellent adhesion to a variety of overmolding chemistries Specific Notes for this Material: Fiberglass reinforced TPU -automotive and non-auto OEM approved Information provided by Noveon, Inc.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Lubrizol-ESTALOC-59600-Ester-Type-Reinforced-Engineering-Thermoplastic-European-Grade.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.64 g/cc	1.64 g/cc	ISO 1183
Filler Content	50 %	50 %	
Linear Mold Shrinkage	0.0013 cm/cm	0.0013 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	75	75	ISO 868
Tensile Strength, Ultimate	93.0 MPa	13500 psi	ISO 527-2/1A/5
Elongation at Break	7.0 %	7.0 %	ISO 527-2/1A/5
Tensile Modulus	5.859 GPa	849.8 ksi	ISO 527-2/1A/1
Flexural Strength	116 MPa	16800 psi	ISO 178
Flexural Modulus	5.85 GPa	848 ksi	ISO 178
Izod Impact, Notched (ISO)	23.0 kJ/m ²	10.9 ft-lb/in ²	Low Temp; ISO 180/1eA
	46.0 kJ/m ²	21.9 ft-lb/in ²	ISO 180/1eA
Izod Impact, Unnotched (ISO)	104 kJ/m ²	49.5 ft-lb/in ²	Low Temp; ISO 180/1eU
	118 kJ/m ²	56.1 ft-lb/in ²	ISO 180/1eU
Charpy Impact Unnotched	12.4 J/cm ²	59.0 ft-lb/in ²	ISO 179/1eU
	98.0 J/cm ²	466 ft-lb/in ²	ISO 179/1eU

Mechanical Properties	@Temperature -30.0 °C Metric	@Temperature -22.0 °F English	Comments
Charpy Impact, Notched	4.50 J/cm ²	21.4 ft-lb/in ²	ISO 179/1eA
	2.10 J/cm ²	9.99 ft-lb/in ²	ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
Taber Abrasion, mg/1000 Cycles	50	50	CS-17 wheel; ASTM D1044

Thermal Properties	Metric	English	Comments
CTE, linear	15.6 μm/m-°C	8.67 μin/in-°F	ASTM D696
	@Temperature 20.0 °C	@Temperature 68.0 °F	
Deflection Temperature at 0.46 MPa (66 psi)	171 °C	340 °F	method Bf; ISO 75-2
Deflection Temperature at 1.8 MPa (264 psi)	130 °C	266 °F	method Af; ISO 75-2
Vicat Softening Point	106 °C	223 °F	temperature B; ISO 36
	167 °C	333 °F	temperature A; ISO 306

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