



Estane® ETE 50DT3 TPU

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

Wednesday, November 6, 2019

General Information

Product Description

Type: Estane® ETE 50DT3 is a 50D aromatic Polyether-Based Thermoplastic Polyurethane (TPU)

Features: Hard TPU with wide extrusion processing window and melt stability, low temperature flexibility, high transparency, UV stable

Uses: Extrusion: Hose and Tube, Profile, Cable Jacket; Injection molding: Various

General

Material Status	• Commercial: Active		
Availability	• Asia Pacific	• Latin America	• North America
Features	• Aromatic • Good Processability	• High Clarity • High Melt Stability	• Low Temperature Flexibility • UV Resistant
Uses	• Cable Jacketing • Hose	• Profiles • Tubing	• Wire & Cable Applications
RoHS Compliance	• RoHS Compliant		
Forms	• Pellets		
Processing Method	• Extrusion • Injection Molding	• Profile Extrusion • Wire & Cable Extrusion	

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.16		ASTM D792
Mechanical	Nominal Value	Unit	Test Method
Taber Abrasion Resistance 1000 Cycles, 1000 g, H-18 Wheel	81.0	mg	ASTM D3389
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress (100% Strain, 0.0300 in)	2200	psi	ASTM D412
Tensile Stress (300% Strain, 0.0300 in)	5110	psi	ASTM D412
Tensile Strength (Break, 0.0300 in)	8700	psi	ASTM D412
Tensile Elongation (Break, 0.0300 in)	420	%	ASTM D412
Tear Strength ² (0.0300 in)	810	lbf/in	ASTM D624
Tear Strength (Split)	190	lbf/in	ASTM D470
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore D, 5 sec)	47 to 53		ASTM D2240
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature	-27.4	°F	DSC
Melting Temperature	302	°F	DSC

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	219	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	379	°F
Cylinder Zone 2 Temp.	390	°F

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Extrusion	Nominal Value	Unit
Cylinder Zone 3 Temp.	399	°F
Cylinder Zone 4 Temp.	410	°F
Adapter Temperature	410	°F
Melt Temperature	399	°F
Die Temperature	410	°F

Extrusion Notes

Dew Point: -40°C

Screen Pack Recommendation: 20/40/80/20

Notes

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

² Die C