Estane® EV 90AT2 NAT 01 EXP

Wednesday, November 6, 2019

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

General Information

Product Description

Type: ESTANE® EV 90AT2 NAT 01 EXP is a non-halogen, flame retardant, aromatic polyether-based thermoplastic polyurethane.

Main application: Extrusion, EV Charging Cables

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Aromatic	• Flame Retardant	• Halogen Free
Uses	• Cable Jacketing	• Electrical/Electronic Applications	
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.24	g/cm³	ISO 2781
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ISO 527-2/5A/200
--	3480	psi	
50% Strain	1160	psi	
100% Strain	1310	psi	
300% Strain	2030	psi	
Tensile Strain (Break)	520	%	ISO 527-2/5A/200
Abrasion Resistance	38.0	mm³	ISO 4649-A
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength [2]	485	lbf/in	ISO 34-1
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore A, 1 sec)	90		ISO 868
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.07 in)	V-2		UL 94
Oxygen Index	23	%	ASTM D2863
Smoke Density			ASTM E662
Flaming DM : 29.5 mil	38		
Non Flaming DM : 29.5 mil	110		

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	212	°F
Drying Time	3.0 to 4.0	hr
Cylinder Zone 1 Temp.	392	°F
Cylinder Zone 2 Temp.	401	°F
Cylinder Zone 3 Temp.	410	°F

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Extrusion	Nominal Value	Unit
Cylinder Zone 4 Temp.	401	°F
Adapter Temperature	401	°F
Die Temperature	401	°F

Notes

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

[2] Method Bb, Angle (Nicked)