



Estane® ZHF 58211 NAT 02

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

Wednesday, November 6, 2019

General Information

Product Description

Type: ESTANE® ZHF 58211 NAT 02 is a non halogen, flame retardant, aromatic polyether-based thermoplastic polyurethane (TPU).

Application: Extrusion

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Aromatic	• Flame Retardant	• Halogen Free
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.25	g/cm ³	ISO 1183
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress ²			Internal Method
--	4060	psi	
50% Strain	1450	psi	
100% Strain	1600	psi	
300% Strain	2180	psi	
Tensile Strain ² (Break)	470	%	Internal Method
Abrasion Resistance	88.0	mm ³	ISO 4649-A
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ³	571	lbf/in	ISO 34-1
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore A, 1 sec)	91		ISO 868
Thermal	Nominal Value	Unit	Test Method
Vicat Softening Temperature	208	°F	ISO 306/A50
Flammability	Nominal Value	Unit	Test Method
Flame Rating	V-2		UL 94
Oxygen Index	25	%	ASTM D2863

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	212	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.020	%
Cylinder Zone 1 Temp.	401	°F
Cylinder Zone 2 Temp.	401	°F
Cylinder Zone 3 Temp.	392	°F
Cylinder Zone 4 Temp.	392	°F

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Extrusion	Nominal Value	Unit
Adapter Temperature	392	°F
Die Temperature	383	°F

Notes

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

² VDE282 part 10

³ Method Ba, Angle (Unnicked)