

Estane® 58212 TPU

Thermoplastic Polyurethane Elastomer (Polyether)

Lubrizol Advanced Materials, Inc.

Message:

Type: Estane® 58212 is a 95A Polyether-type thermoplastic polyurethane (TPU) compound.
Features: Excellent clarity and UV stable with good melt strength. Pre-drying: 2 hours at 104°C (220°F) in dehumidifying hopper dryer
Uses: Extrusion: Cable jacket, hose/tube, profile and film and sheet

General Information	
Features	Good UV resistance
	Good melt strength
	Definition, high
Uses	Films
	Cable sheath
	Wire and cable applications
	Pipe
	Pipe fittings
	Sheet
	Profile
RoHS Compliance	RoHS compliance
Appearance	Clear/transparent
Forms	Particle
Processing Method	Film extrusion
	Wire & Cable Extrusion
	Extrusion
	Sheet extrusion molding
	Profile extrusion molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm ³	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shaw A	92 - 98		ASTM D2240
Shaw D	43 - 49		ASTM D2240
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
--	51.7	MPa	ASTM D638
100% strain	13.5	MPa	ASTM D638
300% strain	31.6	MPa	ASTM D638

Tensile Elongation (Break)	400	%	ASTM D638
Flexural Modulus (23°C)	76.0	MPa	ASTM D790
Taber Abrasion Resistance (1000 Cycles, 1000 g, CS-17 Wheel)	5.00	mg	ASTM D3389
Modulus of Rigidity			ASTM D1053
-50°C	366	MPa	ASTM D1053
-40°C	214	MPa	ASTM D1053
-20°C	41.3	MPa	ASTM D1053
0°C	13.8	MPa	ASTM D1053
23°C	8.40	MPa	ASTM D1053
Elastomers	Nominal Value	Unit	Test Method
Tensile Set (200% Strain)	20	%	ASTM D412
Tensile Stress			ASTM D412
100% strain	13.5	MPa	ASTM D412
300% strain	31.6	MPa	ASTM D412
Tensile Strength (Break)	51.7	MPa	ASTM D412
Tensile Elongation (Break)	400	%	ASTM D412
Tear Strength			
-- ¹	118	kN/m	ASTM D624
Cracking	29	kN/m	ASTM D470
Compression Set			ASTM D395
23°C, 22 hr	36	%	ASTM D395
70°C, 22 hr	61	%	ASTM D395
Thermal	Nominal Value	Unit	Test Method
Glass Transition Temperature ²	-25.0	°C	DSC
Vicat Softening Temperature	115	°C	ASTM D1525
Extrusion	Nominal Value	Unit	
Drying Temperature	104	°C	
Drying Time	2.0	hr	
Suggested Max Moisture	0.030	%	
Cylinder Zone 1 Temp.	182 - 188	°C	
Cylinder Zone 2 Temp.	188 - 199	°C	
Cylinder Zone 3 Temp.	193 - 204	°C	
Cylinder Zone 4 Temp.	199 - 210	°C	
Adapter Temperature	204 - 216	°C	
Die Temperature	193 - 210	°C	
Extrusion instructions			
Screens: 20-40-80-20 meshFeed Throat Cooling: YesScrew Cooling: NoScrew Speed: 15 to 70 rpm			
NOTE			
1.	C mould		
2.	10°C/min		

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