

## Lubrizol Estane® 2103-80PF Thermoplastic Polyurethane Elastomer

Category : Polymer , Thermoplastic , Elastomer, TPE , Polyurethane, TP , Thermoplastic Polyurethane, Elastomer, Ether Grade

### Material Notes:

Formerly Pellethane  
 Feature: Film and profile resin  
 Available in Americas, Europe, Middle East, Africa, India and Asia  
 Data provided by Lubrizol  
 Lubrizol acquired the Pellethane product line from Dow in 2009.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Lubrizol-Estane-2103-80PF-Thermoplastic-Polyurethane-Elastomer.php](http://www.lookpolymers.com/polymer_Lubrizol-Estane-2103-80PF-Thermoplastic-Polyurethane-Elastomer.php)

Physical Properties	Metric	English	Comments
Density	1.10 g/cc	0.0397 lb/in <sup>3</sup>	ASTM D792
Linear Mold Shrinkage, Flow	0.0040 - 0.0070 cm/cm @Thickness 1.60 mm	0.0040 - 0.0070 in/in @Thickness 0.0630 in	plaque
Linear Mold Shrinkage, Transverse	-0.00200 - 0.0050 cm/cm @Thickness 1.60 mm	-0.00200 - 0.0050 in/in @Thickness 0.0630 in	plaque
Melt Flow	39 g/10 min @Load 8.70 kg, Temperature 190 °C	39 g/10 min @Load 19.2 lb, Temperature 374 °F	ASTM D1238

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	80 - 88	80 - 88	ASTM D2240
Tensile Strength, Ultimate	26.2 MPa	3800 psi	ASTM D412
Elongation at Break	660 %	660 %	ASTM D412
50% Modulus	0.00410 GPa	0.595 ksi	ASTM D412
100% Modulus	0.00520 GPa	0.754 ksi	ASTM D412
300% Modulus	0.00790 GPa	1.15 ksi	ASTM D412
Tear Strength	78.8 kN/m	450 pli	Die C; ASTM D624
Taber Abrasion, mg/1000 Cycles	5.0	5.0	CS17 Wheel, 1000g; ASTM D1044
Compression Set	25 % @Temperature 25.0 °C, Time 79200 sec	25 % @Temperature 77.0 °F, Time 22.0 hour	ASTM D395, Method B
	80 % @Temperature 70.0 °C, Time 79200 sec	80 % @Temperature 158 °F, Time 22.0 hour	ASTM D395, Method B

Mechanical Properties	Metric	English	Comments
			Comments set after break; ASTM D412

Thermal Properties	Metric	English	Comments
CTE, linear	171 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	95.0 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	ASTM D696
	@Temperature 20.0 $^{\circ}\text{C}$	@Temperature 68.0 $^{\circ}\text{F}$	
Vicat Softening Point	68.0 $^{\circ}\text{C}$	154 $^{\circ}\text{F}$	120 $^{\circ}\text{C}/\text{hr}$ , 9.8N; ASTM D1525
Glass Transition Temp, Tg	-46.0 $^{\circ}\text{C}$	-50.8 $^{\circ}\text{F}$	

Processing Properties	Metric	English	Comments
Melt Temperature	182 - 199 $^{\circ}\text{C}$	360 - 390 $^{\circ}\text{F}$	Extrusion
	188 - 204 $^{\circ}\text{C}$	370 - 399 $^{\circ}\text{F}$	Molding
Mold Temperature	16.0 - 60.0 $^{\circ}\text{C}$	60.8 - 140 $^{\circ}\text{F}$	
Drying Temperature	82.0 - 93.0 $^{\circ}\text{C}$	180 - 199 $^{\circ}\text{F}$	

## Contact Songhan Plastic Technology Co.,Ltd.

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