

**Technical Data Sheet**

**Type:** Stat-Rite® E1140 is a static dissipative *Thermoplastic Polyurethane (TPU)* alloy. Stat-Rite® E1140 utilizes the patented Stat-Rite® *Inherently Dissipative Polymer (IDP)* alloy system to provide clean, permanent ESD protection. Stat-Rite® alloys retain uniform static dissipation properties even when injection molded or extruded.

**Features:** Permanently static dissipative, does not require humidity, ultra-clean; low off-gassing; low ionics, see-through clarity, no particulates

**Applications:** Cleanroom soft walls, windows and doors, vacuum tubing, work surface mats

Physical Properties	E1140	Unit	Test Method
Host Polymer	Polyester TPU		
Filler	IDP Alloy		
Color	Transparent		
Specific Gravity	1.2	g/cc	ASTM D-792
Shore Hardness	82	Shore A	ASTM D-2240
<b>Electrical Properties</b>			
Surface Resistance	1 x 10 <sup>10</sup>	Ω	ANSI/ESD STM 11.11
Volume Resistance	4 x 10 <sup>10</sup>	Ω	ANSI/ESD STM 11.12
Static Decay Rate: 1000 V to 50 V	1.3	Seconds	Charged Plaque Monitor (CPM)
<b>Mechanical Properties</b>			
Tensile Strength at Break	4300 (30)	Psi (MPa)	ASTM D-412
Ultimate Elongation	670	%	ASTM D-412
Modulus at 100%	740 (5.1)	Psi (MPa)	ASTM D-412
Modulus at 300%	1160 (8.0)	Psi (MPa)	ASTM D-412
Tear Strength	370 (65)	Ft-lb/in(kN/m)	ASTM D-646

• These are typical values and should not be used for establishing product specifications. Contact Lubrizol Advanced Materials, Inc. if you need data for this purpose.

**Supply Form and Standard Packaging**

- Stat-Rite® E1140 is available in pellet form only.

**Handling Considerations**

- Properties of all Stat-Rite® E1140 polymer products in the molten state are adversely affected by moisture. Although Stat-Rite® compounds are dry when packaged, trace amounts of moisture can be absorbed during storage and handling. For best results, always dry the material 2 – 3 hours at 105 °C (220 °F) in a dehumidifying hopper dryer.

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<http://go.lubrizol.com/EP>

**Typical Cleanliness Properties:**

Cleanroom Properties	Test Method	Test Results
Offgassing Components	Lubrizol Advanced Materials Test Method	ppm
Total Organics	#3010-3	< 0.1
MMA		
Styrene		
Toluene		
Ionic Content - Cations	Lubrizol Advanced Materials Test Method	mg/m <sup>2</sup>
Na		
K		
Ca		
Mg		
Li		
Ionic Content - Anions	Lubrizol Advanced Materials Test Method	mg/m <sup>2</sup>
C1 <sup>-</sup>	#3010-4	0.9
NO <sub>3</sub> <sup>-</sup>		0.06
SO <sub>4</sub> <sup>-</sup>		0.2
PO <sub>4</sub> <sup>-</sup>		5
Others		

For further information refer to Lubrizol Advanced Materials processing guides.

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