

# Stat-Rite® S1100

Thermoplastic Polyurethane Elastomer Alloy

Lubrizol Advanced Materials, Inc.

## Message:

Stat-Rite® S1100 is a static dissipative TPU alloy. Stat-Rite S1100 utilizes the patented Stat-Rite inherently dissipative polymer (IDP) alloy system to provide clean, permanent ESD protection. Stat-Rite® IDP alloys provide consistent static dissipation even when extruded, injection molded or thermoformed into components.

General Information			
Additive	Antistatic		
Features	Antistatic		
	Copolymer		
	Durable		
	ESD Protection		
	Good Colorability		
	Humidity Resistant		
	Low (to None) Ion Content		
Uses	Low to No Outgassing		
	Conveyor Parts		
	Electrical/Electronic Applications		
	Film		
	Hose		
	Rollers		
	Tubing		
Appearance	Clear/Transparent		
	Light Blue		
Forms	Pellets		
Processing Method	Extrusion		
	Injection Molding		
	Thermoforming		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.16	g/cm <sup>3</sup>	ASTM D792
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ASTM D2240
Shore A	90		
Shore D	47		
Elastomers	Nominal Value	Unit	Test Method

Tensile Stress			ASTM D412
100% Strain	8.00	MPa	
300% Strain	15.0	MPa	
Tensile Strength (Break)	26.0	MPa	ASTM D412
Tensile Elongation (Break)	450	%	ASTM D412
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity			
-- <sup>1</sup>	5.0E+8	ohms	ESD S11.11
-- <sup>2</sup>	5.0E+9	ohms	ASTM D257
Volume Resistivity	5.0E+9	ohms·cm	ASTM D257
Static Decay			
+1000 V to 100 V <sup>3</sup>	0.1	sec	
+5000 V to 50 V <sup>4</sup>	0.0100	sec	
-5000 V to -50 V <sup>5</sup>	0.0100	sec	
Ionic Content			Internal Method
Anions Br-	< 2.00	ng/cm <sup>2</sup>	
Anions Cl-	6.00	ng/cm <sup>2</sup>	
Anions F-	1.00	ng/cm <sup>2</sup>	
Anions NO <sub>3</sub> -	10.0	ng/cm <sup>2</sup>	
Anions PO <sub>4</sub> -	50.0	ng/cm <sup>2</sup>	
Anions SO <sub>4</sub> -	10.0	ng/cm <sup>2</sup>	
Non-Volatile Content	1.00	µg/cm <sup>2</sup>	Internal Method
Outgassing			Internal Method
MMA	0.0400	µg/g	
Styrene	< 0.0200	µg/g	
Toluene	< 0.0200	µg/g	
Total Organics	4.50	µg/g	
NOTE			
1.	12% RH		
2.	50% RH		
3.	Charged Plate Monitor, 50% RH		
4.	FTMS-101C, 12% RH		
5.	FTMS-101C, 12% RH		

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### Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

