



# LONESTAR ELECTROSTATIC SOLUTIONS

5213 PINWOOD DR. MCKINNEY TEXAS 75071

Phone: 1-770-856-3119

Email: [LonestarESD@outlook.com](mailto:LonestarESD@outlook.com)

Website: [LonestarESD.com](http://LonestarESD.com)

## SUMMARY

Testing of material samples were performed to ANSI/ESD STM11.11 and 11.12 to determine Surface and Volume resistance of the material. A qty of 6 samples were conditioned to the requirements of the test methods. Each was then tested per the referenced test methods with data recorded and shown below. Results showed a range on Surface Resistance of  $10^9$ –  $10^{10}$  Ohms. Range for Volume Resistance is  $10^9$ –  $10^{10}$  Ohms.

## MATERIAL:

4300-35125 A/S PU  
Sample Thickness: 0.125"

## TEST CONDITIONS:

Qty 6 specimens @ 12.9% RH, 23.2°C, 65 hours conditioning.  
Qty 6 specimens @ 50.2% RH, 23.3°C, 52 hours conditioning.  
Test Voltage (@ Upper Resistance): 100 Volts  
Electrification Period (@ Upper Resistance): 8-10 seconds

## TEST DATA

## TEST METHOD/S:

- ANSI/ESD STM11.11-2022
- ANSI/ESD STM11.12-2021

## STANDARDS:

- PROSTAT PRS-80 I  
RESISTANCE METER (CAL DATE 1-2023)
- PROSTAT PRF-91 I  
CONCENTRIC RING (CAL DATE 2-2023)
- ALL STANDARDS ON 1 YEAR CAL CYCLE.

TABLE 1: SURFACE RESISTANCE DATA

Test Method	Surface Resistance (Ohms) @ 12.9% RH, 23.2°C, 65 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	2.1 x $10^{10}$	2.1 x $10^{10}$	2.8 x $10^{10}$	2.5 x $10^{10}$	2.4 x $10^{10}$	2.9 x $10^{10}$	2.1 x $10^{10}$	2.9 x $10^{10}$	2.47 x $10^{10}$

Test Method	Surface Resistance (Ohms) @ 50.2% RH, 23.3°C, 52 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	5.8 x $10^9$	5.9 x $10^9$	6.0 x $10^9$	6.0 x $10^9$	6.1 x $10^9$	6.4 x $10^9$	5.8 x $10^9$	6.1 x $10^9$	6.03 x $10^9$

**TABLE 2: VOLUME RESISTANCE DATA**

Test Method	Volume Resistance (Ohms) @ 12.9% RH, 23.2°C, 65 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	$7.3 \times 10^9$	$7.5 \times 10^9$	$7.1 \times 10^9$	$8.9 \times 10^9$	$1.2 \times 10^{10}$	$7.7 \times 10^9$	$7.1 \times 10^9$	$1.2 \times 10^{10}$	$8.42 \times 10^9$

Test Method	Volume Resistance (Ohms) @ 50.2% RH, 23.3°C, 52 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	$1.3 \times 10^9$	$1.0 \times 10^9$	$1.0 \times 10^9$	$1.0 \times 10^9$	$1.0 \times 10^9$	$1.0 \times 10^9$	$1.0 \times 10^9$	$1.3 \times 10^9$	$1.05 \times 10^9$