



# LONESTAR ELECTROSTATIC SOLUTIONS

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## 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  $10^7$ –  $10^7$  Ohms. Range for Volume Resistance is  $10^8$ –  $10^8$  Ohms.

## MATERIAL:

15 PVC PD  
Sample Thickness: 0.125"

## TEST CONDITIONS:

Qty 6 specimens @ 12.9% RH, 22.9°C, 60 hours conditioning.  
Qty 6 specimens @ 50.5% RH, 23.3°C, 55 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, 22.9°C, 60 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	$7.4 \times 10^7$	$6.2 \times 10^7$	$7.7 \times 10^7$	$6.9 \times 10^7$	$5.1 \times 10^7$	$7.2 \times 10^7$	$5.1 \times 10^7$	$7.7 \times 10^7$	$6.75 \times 10^7$

Test Method	Surface Resistance (Ohms) @ 50.5% RH, 23.3°C, 55 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	$1.9 \times 10^7$	$1.8 \times 10^7$	$1.9 \times 10^7$	$2.4 \times 10^7$	$2.3 \times 10^7$	$1.4 \times 10^7$	$1.4 \times 10^7$	$2.4 \times 10^7$	$1.95 \times 10^7$

**TABLE 2: VOLUME RESISTANCE DATA**

Test Method	Volume Resistance (Ohms) @ 12.9% RH, 22.9°C, 60 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	$3.2 \times 10^8$	$3.8 \times 10^8$	$3.3 \times 10^8$	$4.1 \times 10^8$	$4.0 \times 10^8$	$3.5 \times 10^8$	$3.2 \times 10^8$	$4.1 \times 10^8$	$3.65 \times 10^8$

Test Method	Volume Resistance (Ohms) @ 50.5% RH, 23.3°C, 55 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	$2.0 \times 10^8$	$1.6 \times 10^8$	$1.8 \times 10^8$	$1.7 \times 10^8$	$1.4 \times 10^8$	$1.9 \times 10^8$	$1.4 \times 10^8$	$2.0 \times 10^8$	$1.73 \times 10^8$