



# 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  $10^3$ –  $10^5$  Ohms. Range for Volume Resistance is  $10^3$ –  $10^5$  Ohms.

## MATERIAL:

Durashield 140250  
Sample Thickness: 0.125"

## TEST CONDITIONS:

Qty 6 specimens @ 12.8% RH, 23.2°C, 62 hours conditioning.  
Qty 6 specimens @ 50.3% 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-801  
RESISTANCE METER (CAL DATE 1-2023)
- PROSTAT PRF-911  
CONCENTRIC RING (CAL DATE 2-2023)
- ALL STANDARDS ON 1 YEAR CAL CYCLE.

TABLE 1: SURFACE RESISTANCE DATA

Test Method	Surface Resistance (Ohms) @ 12.8% RH, 23.2°C, 62 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	$4.6 \times 10^5$	$5.7 \times 10^5$	$4.5 \times 10^5$	$4.9 \times 10^5$	$5.1 \times 10^5$	$4.1 \times 10^5$	$4.1 \times 10^5$	$5.7 \times 10^5$	$4.82 \times 10^5$

Test Method	Surface Resistance (Ohms) @ 50.3% 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	$3.0 \times 10^3$	$4.9 \times 10^3$	$3.2 \times 10^3$	$3.8 \times 10^3$	$3.6 \times 10^3$	$2.5 \times 10^3$	$2.5 \times 10^3$	$4.9 \times 10^3$	$3.5 \times 10^3$

**TABLE 2: VOLUME RESISTANCE DATA**

Test Method	Volume Resistance (Ohms) @ 12.8% RH, 23.2°C, 62 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	$2.7 \times 10^5$	$3.6 \times 10^5$	$2.7 \times 10^5$	$3.2 \times 10^5$	$3.1 \times 10^5$	$2.4 \times 10^5$	$2.4 \times 10^5$	$3.6 \times 10^5$	$2.95 \times 10^5$

Test Method	Volume Resistance (Ohms) @ 50.3% 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	$1.6 \times 10^3$	$2.2 \times 10^3$	$2.3 \times 10^3$	$1.8 \times 10^3$	$1.8 \times 10^3$	$1.6 \times 10^3$	$1.6 \times 10^3$	$2.3 \times 10^3$	$1.88 \times 10^3$