



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 $10^4 - 10^8$ Ohms. Range for Volume Resistance is $10^4 - 10^9$ Ohms.

MATERIAL:

LD30 Foam
Sample Thickness: 0.125"

TEST CONDITIONS:

Qty 6 specimens @ 12.7% RH, 23°C, 55 hours conditioning.
Qty 6 specimens @ 50.8% RH, 23°C, 57 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) @ 12.7% RH, 23°C, 55 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	6.06 x 10^8	3.42 x 10^8	4.59 x 10^8	8.77 x 10^7	7.74 x 10^8	9.11 x 10^7	8.77 x 10^7	7.74 x 10^8	3.93 x 10^8

Test Method	Surface Resistance (Ohms) @ 50.8% RH, 23°C, 57 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	7.59 x 10^4	5.27 x 10^4	2.32 x 10^5	5.05 x 10^4	1.04 x 10^5	4.33 x 10^4	4.33 x 10^4	2.32 x 10^5	9.31 x 10^4

TABLE 2: VOLUME RESISTANCE DATA

Test Method	Volume Resistance (Ohms) @ 12.7% RH, 23°C, 55 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
	ANSI/ESD STM 11.12	8.14 x 10 ⁸	2.93 x 10 ⁹	4.06 x 10 ⁸	3.03 x 10 ⁸	5.57 x 10 ⁸	2.13 x 10 ⁹	3.03 x 10 ⁸	2.93 x 10 ⁹

Test Method	Volume Resistance (Ohms) @ 50.8% RH, 23°C, 57 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
	ANSI/ESD STM 11.12	6.22 x 10 ⁴	1.39 x 10 ⁵	7.02 x 10 ⁴	4.81 x 10 ⁴	6.69 x 10 ⁴	2.42 x 10 ⁵	4.81 x 10 ⁴	2.42 x 10 ⁵