



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^{10} – 10^{11} Ohms. Range for Volume Resistance is 10^{10} – 10^{11} Ohms.

MATERIAL:

AS 200
Sample Thickness: 0.125"

TEST CONDITIONS:

Qty 6 specimens @ 12.7% RH, 23.2°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-9 I 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, 23.2°C, 60 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.11	3.4 x 10^{11}	3.7 x 10^{11}	3.2 x 10^{11}	1.9 x 10^{11}	2.2 x 10^{11}	2.7 x 10^{11}	1.9 x 10^{11}	3.7 x 10^{11}	2.85 x 10^{11}

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	1.0 x 10^{11}	1.1 x 10^{11}	8.8 x 10^{10}	4.0 x 10^{10}	4.7 x 10^{10}	2.6 x 10^{10}	2.6 x 10^{10}	1.1 x 10^{11}	6.85 x 10^{10}

TABLE 2: VOLUME RESISTANCE DATA

Test Method	Volume Resistance (Ohms) @ 12.7% RH, 23.2°C, 60 hours conditioning								
	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6	Min	Max	Mean
ANSI/ESD STM 11.12	1.5 x 10 ¹¹	2.1 x 10 ¹¹	1.3 x 10 ¹¹	2.0 x 10 ¹¹	2.8 x 10 ¹¹	2.2 x 10 ¹¹	1.3 x 10 ¹¹	2.8 x 10 ¹¹	1.98 x 10 ¹¹

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	4.6 x 10 ¹⁰	4.0 x 10 ¹⁰	3.9 x 10 ¹⁰	2.8 x 10 ¹⁰	3.6 x 10 ¹⁰	2.1 x 10 ¹⁰	2.1 x 10 ¹⁰	4.6 x 10 ¹⁰	3.50 x 10 ¹⁰