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QUALIFICATION REPORT – ANSI/ESD STM11.11 & STM11.31

Test Date: 2022-06-20 (12%RH, 23°C)
2022-06-25 (50%RH, 23°C)

Product Identification: STATIC SHIELD BAG, 81705 SERIES

Manufacturer ID: SCS

Manufacturer Value: Surface Resistance - Interior: 1.0×10^4 to $< 1.0 \times 10^{11}$ ohms
Surface Resistance - Exterior: $< 1.0 \times 10^{11}$ ohms
Discharge Shielding: ≤ 10 nJ



ANSI/ESD S20.20	Test Results	Test Methods
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Surface Resistance (ohms), 12% RH, 23°C, 48-72 hours conditioning, N=6 specimens, 100V

Location	Resistance Range	Test Results	Test Methods
Interior (Sealing Surface)	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11
Exterior	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11

Surface Resistance (ohms), 50% RH, 23°C, 48-72 hours conditioning, N=6 specimens, 100V

Location	Resistance Range	Test Results	Test Methods
Interior (Sealing Surface)	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11
Exterior	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11

Discharge Shielding (nJ) @ 23°C, minimum 48 hours conditioning, N=6 specimens, 6 individual readings per specimen

Condition	Shielding Value	Test Results	Test Methods
@ 12% RH	< 20	See Table 1	ANSI/ESD STM11.31
@ 50% RH	< 20	See Table 1	ANSI/ESD STM11.31

Test Equipment (Calibration records and test results are located at corporate lab (Sanford, NC)):

Equipment	Model	Serial No.	Calibration Date	Calibration Due Date
ETS Controlled Environment Chamber	5532	97	2022-06-02	2023-06-02
SCS Surface Resistance Meter	770761	000002142003	2022-07-11	2023-07-11
SCS Concentric Ring Probe	770007	N/A	N/A	N/A
ETS Shielded Bag Test System	4431T	020	2022-03-07	2023-03-07
Tektronix Oscilloscope	TDS2022C	C040701	2022-03-11	2023-03-11

Table 1: Test Results

Specimen	Surface Resistance (ohms)* 48-72 hours conditioning				Discharge Shielding (nJ) min. 48 hours conditioning	
	Interior @ 23°C, 12%RH	Exterior @ 23°C, 12%RH	Interior @ 23°C, 50%RH	Exterior @ 23°C, 50%RH	@ 23°C, 12%RH (avg 6 individual)	@ 23°C, 50%RH (avg 6 individual)
1	3.66×10^{10}	2.27×10^{10}	1.07×10^{10}	9.53×10^8	7.01	10.32
2	4.06×10^{10}	2.84×10^{10}	5.77×10^9	7.35×10^8	8.37	10.62
3	4.47×10^{10}	2.96×10^{10}	6.76×10^9	1.12×10^9	6.80	7.53
4	5.02×10^{10}	3.47×10^{10}	3.74×10^9	1.34×10^9	5.34	8.09
5	5.41×10^{10}	3.17×10^{10}	7.04×10^9	1.35×10^9	6.26	7.89
6	6.07×10^{10}	4.56×10^{10}	1.33×10^{10}	1.29×10^9	5.71	6.89
Min Ind=	3.66×10^{10}	2.27×10^{10}	3.74×10^9	7.35×10^8	5.34	7.53
Max Ind=	6.07×10^{10}	4.56×10^{10}	1.33×10^{10}	1.35×10^9	8.37	10.62
Mean of Ind=	4.78×10^{10}	3.21×10^{10}	7.89×10^9	1.13×10^9	6.58	8.56
Std Dev Ind =	8.93×10^9	7.71×10^9	3.49×10^9	2.47×10^8	1.00	1.90

*Electrification time: 15 seconds (automatic)