

DESCO INDUSTRIES INCORPORATED

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QUALIFICATION REPORT – ANSI/ESD S20.20

DESCO STATSHIELD® STANDARD MOISTURE BARRIER BAG

ANSI/ESD S20.20	DESCO Test Results	Test Methods
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Surface Resistance (ohms) @ 12% RH, 23°C, 48-72 hours conditioning, N=10 specimens, 100V

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

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

@ 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)):

For Test Method ANSI/ESD STM11.11:

- ETS Controlled Environment Chamber (Model 5532)
- SCS Surface Resistance Meter (Model 770761)
- SCS Concentric Ring Probe (Model 770007)

For Test Method ANSI/ESD STM11.31:

- ETS Controlled Environment Chamber (Model 5532)
- ETS Shielded Bag Test System (Model 4431T)

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	3.52×10^{10}	3.26×10^{10}	1.72×10^9	2.01×10^9	0.57	0.64
2	3.26×10^{10}	2.60×10^{10}	2.03×10^9	1.87×10^9	0.57	0.62
3	3.74×10^{10}	2.46×10^{10}	1.82×10^9	1.24×10^9	0.56	0.62
4	4.29×10^{10}	3.56×10^{10}	1.93×10^9	1.58×10^9	0.54	0.60
5	4.20×10^{10}	4.50×10^{10}	1.37×10^9	9.34×10^8	0.52	0.59
6	4.78×10^{10}	3.26×10^{10}	1.69×10^9	1.29×10^9	0.50	0.58
7	4.09×10^{10}	2.96×10^{10}				
8	4.72×10^{10}	3.56×10^{10}				
9	7.20×10^{10}	2.59×10^{10}				
10	5.67×10^{10}	4.29×10^{10}				
Min Ind=	2.46×10^{10}	2.46×10^{10}	1.37×10^9	9.34×10^8	0.50	0.58
Max Ind=	7.20×10^{10}	4.50×10^{10}	2.03×10^9	2.01×10^9	0.57	0.64
Mean of Ind=	4.55×10^{10}	3.30×10^{10}	1.76×10^9	1.49×10^9	0.54	0.61
Std Dev Ind =	1.16×10^{10}	6.97×10^9	2.30×10^8	4.09×10^8	0.03	0.03