



Made in America

Description

Desco's Disposable ESD Mat meets ANSI/ESD S20.20 worksurface required limit and recommendation of ANSI/ESD S4.1 for contact with ESD susceptible items. The material is intended to be a sacrificial material to protect a more expensive worksurfaces from damage caused by conformal coating, solder fluxes, or other contaminates. The material is made from a 100% recyclable dissipative impregnated worksurface material and has an internal conductive layer so that it does not generate a static charge and will control the discharge rate from all conductors (including ESD susceptible items) that are placed on the surface. The mat may be grounded by placing it onto an already grounded ESD worksurface.

PROPERTIES

Surface Resistance
High-Voltage Discharge Resistance
Static Shielding
Corrosivity
Antistat Transfer
Sloughing Test

TYPICAL VALUES

10E6 - 10E8 ohms
Failure rate 0/5 (no oxide damage in five consecutive tests)
99.9% attenuation at 10kV; 99.6% attenuation at 30kV
Contains 1-3 ppm reducible sulfur
No transfer
Negligible surface damage at 10 cycles and <5% of surface damage at 200 cycles in Taber Abrasion Test.
No conductive particles abraded from surface
Complete recyclability of package
Biodegradation in or on moist soil

TEST PROCEDURES/METHOD

ANSI/ESD S4.1
Rockwell International Test Report of December 20, 1991
EIA 541, appendix E, capacitive probe test
FED-STD-101, Method 3005 for reducible sulfur
Rockwell International Test Report of January 8, 1992
ASTM D4060 at 70 rpm with CS-17 abrasive-coated wheels and 1000 grams load
Rockwell International Test Report of January 8, 1992
Rockwell International Test Report of January 8, 1992

Recyclability
Biodegradability

Available Sizes

| Item | Size - L" x W" |
|-----------------------|----------------|
| 82100 | 11 x 14 |
| 82101 | 14 x 22 |

Custom sizes available. Ask for quote.

"Resistance-to-groundable point 1 x 10E6 to 1 x 10E9 ohms. Resistance from point-to-point greater than 1 megohm. These guidelines represent a range of resistance that has generally been proven to provide protection in the manufacturing environment." [ANSI/ESD S4.1 section 8. Resistance Guidelines]

"[Rtg is] The most important functional consideration for worksurfaces. This establishes the resistance of the primary path to ground for items, placed on the surface. When worksurface materials are being selected, consideration should be given to possible Charged Device Model (CDM) damage to ESD sensitive products. If CDM damage is a concern then setting a lower resistance limit for the worksurface should be considered. Typically, the lower limit for these types of worksurfaces is 1 X10E6 ohms." [ESD Handbook TR20.20 section 5.3.1.7 Electrical Considerations]

RoHS Compliance Statement
None of the following materials are intentionally added in manufacturing this product: lead, mercury, cadmium, hexavalent chromium, polybrominated biphenyls (PBB) or polybrominated diphenyl ethers (PBDE) as outlined in the Directive 2002/95/EC Article 4.1. See Desco Inc. letter on-line at [Desco.com](#).

Unless otherwise noted, tolerance is ±10%

Specifications and procedures subject to change without notice.

Disposable ESD Mats

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DRAWING NUMBER
82100

DATE:
March
2011