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**NATIONAL STANDARD OF THE  
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**Electrostatics - Part 4-8: Standard test methods for specific  
applications - Electrostatic discharge shielding bags**

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### Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1. Structure and Drafting Rules of Standardization Documents"

Drafting.

This document is Part 4-8 of GB/T 37977 "Electrostatics". GB/T 37977 has released the following parts.

- Part 2-1. Test methods Materials and products electrostatic charge dissipation ability;
- Part 2-3. Test methods for resistance and resistivity of antistatic solid planar materials;
- Part 3-2. Simulation method of electrostatic effects and electrostatic discharge test waveform of machine model (MM);
- Part 4-8. Standard test methods for electrostatic discharge shielding bags in specific applications;
- Part 5-1. General requirements for electrostatic protection of electronic devices.

This document is equivalent to IEC 61340-4-8:2014 "Electrostatics Part 4-8. Standard test methods for electrostatic discharge in specific applications."

Electrical shielding bag".

Please note that some content in this document may be subject to patents. The publisher of this document assumes no responsibility for identifying patents.

### Introduction

The GB/T 37977 series of standards are basic standards for electrostatics. They all adopt the IEC 61340 series of international standards to define electrostatic effects.

Simulation methods, anti-static parameter testing methods for anti-static materials and products, standard test methods in specific applications, electrostatic protection of electronic devices

Protect etc. The GB/T 37977 series of standards is planned to consist of 11 parts, consistent with the structure of the IEC 61340 series of standards.

---Part 2-1. Test methods for electrostatic charge dissipation capabilities of materials and products. The purpose is to specify test methods for testing insulation and the static charge dissipation capabilities of static dissipative materials and products.

---Part 2-3. Test methods for resistance and resistivity of antistatic solid planar materials. The purpose is to specify test methods for measuring

Test the resistance and resistivity of the anti-static solid planar material. The applicable range of the measured resistance is 104ohm~1012ohm.

---Part 3-1. Simulation method of electrostatic effects and electrostatic discharge test waveform of human body model (HBM). The purpose is to specify

Basic requirements for electrostatic discharge current waveforms used to simulate HBM and the equipment used to generate and verify these waveforms.

---Part 3-2. Simulation method of electrostatic effects and electrostatic discharge test waveform of machine model (MM). The purpose is to specify

Basic requirements for simulating electrostatic discharge current waveforms of MM and the equipment used to generate and verify these waveforms.

---Part 4-1. Standard test methods Resistance of floor coverings and assembled floors in specific applications. The purpose is to specify the test

This test method is used to test the resistance of floor coverings and assembled floors, including ground resistance, point-to-point resistance and vertical resistance. It is

The applicable range of resistance measurement is 104ohm~1013ohm.

---Part 4-3. Standard test methods for footwear in specific applications. The purpose is to specify test methods for testing anti-static shoes

The resistance.

---Part 4-5. Standard test methods for characterization of electrostatic protection characteristics of human/shoe/ground systems in specific applications. The purpose is

It is a prescribed test method for evaluating the anti-static performance of the person/shoe/ground system.

---Part 4-6. Standard test methods for wristbands in specific applications. The purpose is to clarify the electrical and mechanical performance requirements of the wristband.

requirements, and experimental methods for testing these properties.

---Part 4-8. Standard test methods for electrostatic discharge shielding bags in specific

applications. The purpose is to provide evaluation of electrostatic discharge screens

Test method for bag performance.

---Part 4-9. Standard test methods for clothing in specific applications. The purpose is to specify test methods for testing anti-static clothing

installed resistor.

---Part 5-1. General requirements for electrostatic protection of electronic devices. The purpose is to establish anti-static management and technical requirements to avoid or

Reduce damage to electronic products due to electrostatic discharge.

This document is part 4-8 and provides the field of electrostatic testing with a reproducible and general method for testing and determining the performance of electrostatic discharge shielding bags.

Electrostatic discharge shielding capability.

This test method describes the use of a single current

The probe measures the induced energy value in the shielding bag.

This document proposes the following important factors that influence test results.

---Discharge waveform characteristics;

---The capacitance value of the capacitive probe;

---Shielding bag size.

Electrostatics Part 4-8. Specific Applications

Standard Test Methods for Electrostatic Discharge Shielding Bags

## 1 Scope

This document describes the test methods and test device settings for evaluating the performance of electrostatic discharge shielding bags in accordance with the requirements of IEC 61340-5-3

The voltage is DC 1000V.

This test method is also applicable to other flexible packaging except shielding bags.

The purpose of this document is to ensure that testing laboratories obtain similar results when testing a given packaging material.

This document does not apply to electromagnetic interference (EMI), radio frequency interference (RFI), electromagnetic pulse (EMP) or volatile substance shielding protection.

## 2 Normative reference documents

The contents of the following documents constitute essential provisions of this document through normative references in the text. Among them, the dated quotations

For undated referenced documents, only the version corresponding to that date applies to this document; for undated referenced documents, the latest version (including all amendments) applies to

this document.

IEC 61340-3-1 Electrostatics Part 3-1. Simulation method of electrostatic effects  
Electrostatic discharge test wave of human body model (HBM)

IEC 61340-5-3 Electrostatics Part 5-3. Electrostatic protection of electronic devices  
Characteristics and requirements for packaging of electrostatic discharge sensitive devices  
vices)

IEC 62631-3-2 Dielectric and resistive properties of solid insulating materials Part  
3-2. Resistive properties (DC method) Surface resistance and

Note. IEC 62631-3-1 and IEC 62631-3-2 have replaced IEC 60093. This document refers to IEC 62631-3-2.

## 3 Terms and definitions

The following terms and definitions apply to this document.

### 3.1

Limit the passage of coupling current caused by electrostatic discharge, or attenuate and block the electromagnetic field generated by electrostatic discharge.

### 4.1 ESD simulator

The equivalent circuit of the simulator consists of a capacitor with a capacitance of 100pF and a resistor with a resistance of 1500ohm in series.