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ANSI/ESD STM12.1-2013
Revision of ANSI/ESD STM12.1-2006

ESD Association Standard Test Method

For the Protection of Electrostatic Discharge Susceptible Items

Seating – Resistance Measurements

ANSI/ESD STM12.1-2013

Electrostatic Discharge Association
7900 Turin Road, Bldg. 3
Rome, NY 13440

An American National Standard
Approved May 5, 2014

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ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items -

Seating – Resistance Measurements

Approved July 15, 2013
ESD Association



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Published by:

Electrostatic Discharge Association
7900 Turin Road, Bldg. 3
Rome, NY 13440

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Printed in the United States of America

ISBN: 1-58537-256-0

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(This foreword is not part of ESD Association Standard Test Method ANSI/ESD STM12.1-2013)

FOREWORD

This standard test method[1] is intended to provide test methods for evaluating seating used to control electrostatic discharge. This standard test method covers all types of seating including chairs and stools.

This standard test method is limited to defining procedures for measuring electrical resistance. Electrical resistance is one property that can be used to evaluate the electrostatic dissipation of seating intended for use in ESD controlled areas. Resistance, however, does not fully characterize seating. An additional property to be considered in the selection and use of seating includes triboelectric charge generation.

One source of electrostatic charge generation in a work environment is the separation of personnel from chairs, stools or other types of seating along with the movement of seating across the floor. This results in the generation of electrostatic charge that can accumulate on the seating and on personnel. The affect of this generation and accumulation of electrostatic charge can be minimized with the appropriate selection of seating.

To effectively control electrostatic discharge, seating must be used in combination with an ESD controlled floor or mat. Seating is not a primary means of controlling electrostatic charge buildup on personnel in an ESD protective work area. Personal wrist straps or other means of personnel grounding should be used for this purpose.

This document was originally designated ESD STM12.1-1997 and approved on September 20, 1997. ANSI/ESD STM12.1-2006 was a reaffirmation of ESD STM12.1-1997 and was approved on February 26, 2006. ANSI/ESD STM12.1-2013 is a revision of ANSI/ESD STM12.1-2006 and was approved on July 15, 2013.

At the time ANSI/ESD STM12.1-2013 was prepared, the 12.0 Seating Subcommittee had the following members:

Bill DeJean, Chair
TDI International

Guy Kasai Gibo Kodama Chairs	John Kinnear, TAS Rep IBM	Scott Ward Texas Instruments

At the time ESD STM12.1-1997 was prepared, the 12.0 Seating Subcommittee had the following members:

Stanley Weitz, Chair
Electro-Tech Systems, Inc.

Jim Frobose Biofit	Larry Fromm Hewlett- Packard	David Gerke Eck Adams
Ken Hansen Tellabs	Don Hyman Storage Technology	Tom Judkins Gibo Kodama
	Arnold Krumrie Steelcase	

[1] **Standard Test Method (STM):** A definitive procedure for the identification, measurement and evaluation of one or more qualities, characteristics or properties of a material, product, system or process that yield a **reproducible test** result.

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TABLE OF CONTENTS

1.0 PURPOSE, SCOPE, AND APPLICATION 1

1.1 PURPOSE 1
1.2 SCOPE 1
1.3 APPLICATION 1

2.0 REFERENCED DOCUMENTS 1

3.0 DEFINITIONS 1

4.0 PERSONNEL SAFETY 1

5.0 TEST METHODS 2

5.1 APPARATUS REQUIREMENTS 2
5.1.1 Resistance Measurement Apparatus (Meter) 2
5.1.2 Resistance Measurement Electrode(s) 2
5.2 TEST PROCEDURES - QUALIFICATION TESTING 3
5.2.1 Specimen Preparation 3
5.2.2 Cleaning of Specimens 3
5.2.3 Humidity Conditioning 3
5.2.4 Specimen Support Surface 3
5.2.5 Measurements 3
5.2.6 Reporting of Test Results 4
5.3 TEST PROCEDURES - ACCEPTANCE TESTING 4
5.3.1 Specimen Preparation 4
5.3.2 Cleaning of Specimens 4
5.3.3 Conditions for Test 4
5.3.4 Measurements 4
5.3.5 Reporting of Test Results 4

6.0 RESISTANCE GUIDELINES 4

7.0 OTHER CONSIDERATIONS 4

8.0 COMPLIANCE VERIFICATION 5

FIGURES

Figure 1: Resistance to Groundable Point Test Positions 5
Figure 2: Seating Component Test Positions 6
Figure 3: Seating Resistance Characterization Data Sheet 7

ANNEXES

Annex A (Informative): Bibliography 8
Annex B (Informative): ANSI/ESD STM12.1-2013 Revision History 9

This is a preview of "ANSI/ESD STM12.1-201...". Click here to purchase the full version from the ANSI store.

ESD Association Standard Test Method for the Protection of Electrostatic Discharge Susceptible Items - Seating - Resistance Measurement

1.0 PURPOSE, SCOPE, AND APPLICATION

1.1 Purpose

This document provides test methods for measuring the electrical resistance of seating used for the control of electrostatic charge. This standard test method provides test methods for the qualification of seating prior to installation or application.

1.2 Scope

The test methods established here are designed to measure the resistance of seating. The resistances considered here are measured from various components of the seating to a groundable point such as a conductive caster or a drag chain. Resistivity measurements are not within the scope or purpose of this standard test method.

1.3 Application

This document relies on resistance measurements utilizing standard instruments to provide a means of evaluating seating.

This document does not apply to electrically initiated explosive devices, flammable liquids, or powders.

2.0 REFERENCED DOCUMENTS

ESD ADV1.0, ESD Association's Glossary of Terms[2]

ANSI/ESD S4.1, Worksurfaces – Resistance Measurements[2]

ANSI/ESD S7.1, Floor Materials Characterization of Materials[2]

ANSI/ESD S8.1, Symbols - ESD[2]

ANSI/ESD S6.1, Grounding[2]

ASTM D2240, Test for Rubber Property – Durometer Hardness[3]

3.0 DEFINITIONS

The terms used in the body of this document are in accordance with the definitions found in ESD ADV1.0, ESD Association's Glossary of Terms available for complimentary download at www.esda.org.

4.0 PERSONNEL SAFETY

The procedures and equipment described in this document may expose personnel to hazardous electrical conditions. Users of this document are responsible for selecting equipment that complies with applicable laws, regulatory codes, and both external and internal policy. Users are cautioned that this document cannot replace or supersede any requirements for personnel safety.

Ground fault circuit interrupters (GFCI) and other safety protection should be considered wherever personnel might come into contact with electrical sources.

Electrical hazard reduction practices should be exercised and proper grounding instructions for equipment should be followed.

[2] ESD Association, 7900 Turin Road, Bldg 3, Ste 2, Rome, NY, 13440-2069, 315-339-6937, www.esda.org

[3] American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959, 610-832-9500