

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Electrostatics –

Part 6-1: Electrostatic control for healthcare – General requirements for facilities

Électrostatique –

Partie 6-1: Contrôle électrostatique dans le domaine de la santé – Exigences générales relatives aux établissements



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ELECTROSTATICS –**Part 6-1: Electrostatic control for healthcare –
General requirements for facilities****FOREWORD**

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International Standard IEC 61340-6-1 has been prepared by IEC technical committee 101: Electrostatics.

The text of this International Standard is based on the following documents:

FDIS	Report on voting
101/566/FDIS	101/570/RVD

Full information on the voting for the approval of this International Standard can be found in the report on voting indicated in the above table.

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 61340 series, published under the general title *Electrostatics*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

INTRODUCTION

Static electricity can be the source of several hazards to patients, staff and equipment in healthcare facilities. Such hazards include:

- electromagnetic disturbance or electrostatic discharge (ESD) disruption or damage to medical instrumentation and data processing equipment;
- damage to ESD susceptible electronic components and assemblies during service and maintenance;
- electrostatic attraction (ESA) and contamination;
- ignition of flammable gases, liquids and other materials, and
- electrostatic shocks to people.

Adequate electrostatic control can eliminate these hazards, or at least reduce residual risk to tolerable levels.

ELECTROSTATICS –

Part 6-1: Electrostatic control for healthcare – General requirements for facilities

1 Scope

This part of IEC 61340 applies to facilities that provide healthcare including hospitals, care centres and clinics.

This document provides technical requirements and recommendations for controlling electrostatic phenomena in healthcare facilities, which includes requirements for equipment, materials, and products used to control static electricity.

The requirements of this document do not apply to medical electrical equipment specified in IEC 60601-1 [1]¹ and in vitro diagnostic (IVD) medical equipment specified in IEC 61010-2-101 [2].

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60364-7-710, *Electrical installations of buildings – Part 7-710: Requirements for special installations or locations – Medical locations*

IEC TR 61340-1, *Electrostatics – Part 1: Electrostatic phenomena – Principles and measurements*

IEC 61340-2-1, *Electrostatics – Part 2-1: Measurement methods – Ability of materials and products to dissipate static electric charge*

IEC 61340-2-3, *Electrostatics – Part 2-3: Methods of test for determining the resistance and resistivity of solid materials used to avoid electrostatic charge accumulation*

IEC 61340-4-1, *Electrostatics – Part 4-1: Standard test methods for specific applications – Electrical resistance of floor coverings and installed floors*

IEC TS 61340-4-2:2013, *Electrostatics – Part 4-2: Standard test methods for specific applications – Electrostatic properties of garments*

IEC 61340-4-3, *Electrostatics – Part 4-3: Standard test methods for specific applications – Footwear*

IEC 61340-4-5, *Electrostatics – Part 4-5: Standard test methods for specific applications – Methods for characterizing the electrostatic protection of footwear and flooring in combination with a person*

¹ Numbers in square brackets refer to the bibliography.

IEC 61340-5-1, *Electrostatics – Part 5-1: Protection of electronic devices from electrostatic phenomena – General requirements*

ISO 18080-2, *Textiles – Test methods for evaluating the electrostatic propensity of fabrics – Part 2: Test method using rotary mechanical friction*

ISO 18080-3, *Textiles – Test methods for evaluating the electrostatic propensity of fabrics – Part 3: Test method using manual friction*

ISO 18080-4, *Textiles – Test methods for evaluating the electrostatic propensity of fabrics – Part 4: Test method using horizontal mechanical friction*

ISO 20344, *Personal protective equipment – Test methods for footwear*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC TR 61340-1 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

3.1

acceptance test

test used to determine if systems or products meet specified requirements prior to installation or first use

Note 1 to entry: Acceptance tests may be the same as those used for qualification, or can be simpler tests more appropriate for use in a facility rather than a controlled test laboratory.

3.2

electrostatic attraction

ESA

force between two or more oppositely charged objects resulting in an increased deposition rate of particles onto charged surfaces or movement of charged particles

Note 1 to entry: This note applies to the French language only.

3.3

electrostatic discharge

ESD

transfer of electric charge between bodies of different electric potential in proximity or through direct contact

3.4

electrostatic discharge sensitive device

ESDS

sensitive devices, integrated circuit or assembly that can be damaged by electrostatic fields or electrostatic discharge

Note 1 to entry: This note applies to the French language only.