

ICS 13.040.35

CCS C 70



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 33555-2025

Replacing GB/T 33555-2017

**Cleanrooms and associated controlled environments -
Technical requirements of electrostatic control**

洁净室及相关受控环境 静电控制技术要求

Issued on: April 25, 2025

Implemented on: November 1, 2025

**Issued by: State Administration for Market Regulation;
Standardization Administration of the PRC**

Table of Contents

Preface	III
Introduction	IV
1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Sources and hazards of static electricity	3
5 Technical Requirements	4
Appendix A (Informative) Sources and Control Elements of Static Electricity	8
Appendix B (Informative) Technical Measures	10
Appendix C (Informative) Anti-static Floor Type	13
Appendix D (Informative) EPA Classification or Category	14
Appendix E (Informative) Anti-static Equipment and Tools Performance	15
References	16

Foreword

This document is in accordance with the provisions of GB/T 1.1-2020 "Guidelines for standardization work Part 1: Structure and drafting rules for standardization documents" Drafting.

This document replaces GB/T 33555-2017 "Technical Guidelines for Electrostatic Control in Clean Rooms and Related Controlled Environments" and GB/T 33555- Compared with 2017, in addition to structural adjustments and editorial changes, the main technical content changes are as follows.

- a) The scope of application has been changed (see Chapter 1, Chapter 1 of the 2017 edition);
- b) Changed the definitions of the terms "static control", "electrostatic discharge" and "static dissipative material" (see 3.1, 3.4 and 3.13, 2017 edition) 3.4, 3.5 and 3.1);
- c) Deleted the terms such as electrostatic field (see 3.2, 3.3, 3.6 and 3.7 of the 2017 edition);
- d) Added the terms "electrostatic discharge sensitive", "electrostatic attraction", "anti-static work area", "electrostatic induction", "electrostatic charging", "isolated conductive Definitions of "body", "working surface", "cleanroom suitability", "enclosure", "ionization

eliminator" and "equipotential bonding" (see 3.2, 3.3, 3.5, 3.6, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.14);

e) Change "static electricity control" to "static electricity sources and hazards" (see Chapter 4, Chapter 4 of the 2017 edition);

f) The relevant contents in "Sources, hazards and monitoring of static electricity" have been changed (see 4.1, 4.2, and 4.1 of the 2017 edition);

g) "Control" has been deleted (see 4.2 of the 2017 edition);

h) "Control measures" has been deleted (see 4.3 of the 2017 edition);

i) Change "training and specifications" to "technical requirements" (see Chapter 5, Chapter 5 of the 2017 edition);

j) Change 5.1, 5.2, 5.3, and 5.4 to "General requirements", "Personnel", "Working surfaces", and "Environment and areas" (see 5.1, 5.2, 5.3, 5.4, 5.1, 5.2, 5.3, 5.4 of the 2017 edition);

k) Added "equipment and tools", "ESDS product packaging, transportation and storage", and "monitoring and testing" (see 5.5, 5.6, and 5.7).

Please note that some of the contents of this document may involve patents. The issuing organization of this document does not assume the responsibility for identifying patents.

This document was proposed and coordinated by the National Technical Committee for Cleanrooms and Related Controlled Environments (SAC/TC319).

This document was drafted by: China Electronics Engineering Design Institute Co., Ltd., MCC Tiangong Group Co., Ltd., Shenzhen Zhongce Metrology and Inspection Co., Ltd.

Testing Technology Co., Ltd., Shenzhen Zhongming Technology Co., Ltd., China Association for Standardization, China Power Investment Engineering Research, Testing and Assessment Center Co., Ltd.

Company, China Electronics Technology Standardization Institute, Shenzhen Kaishide Technology Co., Ltd., Beijing Oriental Metrology and Testing Institute, China Electronics System Engineering Second Construction Co., Ltd., China Electronics System Engineering Fourth Construction Co., Ltd., Beijing Dyna Experiment Technology Co., Ltd., China Electronic System Engineering Third Construction Co., Ltd., Yaxiang System Integration Technology (Suzhou) Co., Ltd., Xiamen Yongpingtang Building Materials Co., Ltd.

Co., Ltd., Beijing Zhongbang Xingye Technology Co., Ltd., Hebei Kehua Antistatic Floor Manufacturing Co., Ltd., Huirui Purification Technology (Jiangsu) Co., Ltd., Bocheng System Technology Co., Ltd., Zhongkai University of Agriculture and Engineering, TCL Huaxing Optoelectronics Technology Co., Ltd., Hefei Jinghe Integrated Circuit Co., Ltd.

Co., Ltd. and Changxin Integrated Storage Technology (Beijing) Co., Ltd.

The main drafters of this document are: Tan Jun, Wang Tianyi, Yang Guangming, Sun Siyu, Gao Zhiliang, Hao Yinbo, Ma Quanli, Guo Kai, Xu Weiwei, Zhang Zhijian, Ding Lixing, Xi Xiaopeng, Qing Shuping, Xu Jingzhe, Huo Jinpeng, Han Hui, Xiu Dongsheng, Sun Shuo, Han Jingui, Han Lingling, Xiang Wei, Lü Guangshuai, Yang Chupeng, Ye Wei, Zhang Zhiqi, and Huang Jiayang.

The previous versions of this document and the documents it replaces are as follows.

- First published in 2017 as GB/T 33555-2017;
- This is the first revision.

Introduction

Static electricity is one of the common sources of pollution in clean rooms and related controlled environments. Static electricity attraction can cause pollutants to accumulate, pollute the clean environment, and affect product quality and personnel health; electrostatic discharge can cause harm to electrostatic sensitive equipment and products in clean environments, and also cause electrical safety and fire protection.

Improper static control measures will not only affect the airflow organization and cleanliness of the clean room, but also affect the electrical and Fire safety. This document specifies the static control measures that are consistent with the design and operation characteristics of clean rooms, based on the characteristics of static sources and hazards in clean rooms.

Technical requirements to control the effects of static electricity in clean rooms.

Cleanrooms and related controlled environments Technical requirements for static control

1 Scope

This document provides the sources and hazards of static electricity in clean rooms and related controlled environments, and specifies the applicable Technical requirements for static control.

This document applies to the control of static electricity in cleanrooms and related controlled environments.

2 Normative references

GB 15982

GB/T 16895.10

GB/T 25915.3

GB/T 25915.4

GB/T 25915.13

GB/T 25915.14

GB/T 25915.15

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 Electrostatic control

Activities that control electrostatic effects within permissible limits for a given environment, product or process.

3.2

Susceptible to malfunction or damage due to electrostatic fields or electrostatic discharge.

3.3 The movement of particles

The interaction between two or more oppositely charged objects results in an increase in the rate of deposition of particles on the charged surface or in the charging of

3.4

The rapid transfer of electrostatic charge between objects with different electrostatic potentials due to direct contact or electrostatic field induction.