

ICS 19.040
CCS K 04



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

GB/T 20643.3-2025

Replacing GB/T 20643.3-2006

**Special environmental condition - Environmental test method -
Part 3: Artificial environmental test method and guidance -
Polymer material**

特殊环境条件 环境试验方法 第3部分：人工模拟试验方法及导则 高分子材料

Issued on: August 1, 2025

Implemented on: February 1, 2026

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

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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 is Part 3 of GB/T 20643 "Environmental test methods for special environmental conditions". GB/T 20643 has been published in Lower part.

- Part 1: General provisions;
- Part 2: Artificial simulation test methods and guidelines for electrical and electronic products (including communication products);
- Part 3: Artificial simulation test methods and guidelines for polymer materials.

This document replaces GB/T 20643.3-2006 "Special environmental conditions environmental test methods Part 3: Artificial simulation test method" Compared with GB/T 20643.3-2006, in addition to structural adjustments and editorial changes, the main technical changes are as follows.

- a) The content of "Scope" has been changed to include humid heat, humid heat ocean, and cold special environmental conditions (see Chapter 1, 2006 edition, Section 1). chapter);
- b) Changed the "Environmental Conditions of Use" (see Chapter 4, Chapter 3 of the 2006 edition);
- c) "General requirements" has been changed (see 5.1, 4.1 of the 2006 edition);
- d) The content of Table 1 has been modified (see Table 1, Table 1 of the 2006 edition);
- e) Deleted "Recommended Tests" (see 4.3 of the 2006 edition);
- f) "Test equipment" has been deleted (see Chapter 5 of the 2006 edition).

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 is proposed and coordinated by the China Electrical Equipment Industry Association.

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

- First published in 2006 as GB/T 20643.3-2006;
- This is the first revision.

Introduction

GB/T 20643 "Environmental test methods for special environmental conditions" covers the test methods of products in China's dry heat, dry hot desert, plateau, damp heat, damp heat Artificial simulation test methods and guidelines for special climate types such as ocean and cold. Currently, GB/T 20643 consists of three parts.

- Part 1: General. The purpose is to propose general rules for natural atmosphere exposure tests and artificial simulation tests under special environmental conditions.

and gives general guidance for environmental testing.

- Part 2: Artificial simulation test methods and guidelines for electrical and electronic products (including communication equipment). The purpose is to propose electrical and electronic products (including communication equipment) artificial simulation test methods and guidelines under special environmental conditions.

- Part 3: Artificial simulation test methods and guidelines for polymer materials. The purpose is to propose the characteristics of polymer materials under special environmental conditions.

Artificial simulation test methods and guidelines.

"Special environmental conditions test" is to expose the sample to natural or artificial simulated dry heat, dry hot desert, plateau, damp heat, wet The special climate conditions of hot ocean, cold and other regions, thus affecting the storage, transportation and use of the products in actual use.

If required by the relevant standards, these test methods can also be used for type testing, batch sampling testing, quality control, etc.

Quantity inspection test and other types of tests.

Environmental test methods for special environmental conditions Part 3: Artificial simulation test methods and guidelines polymer materials

1 Scope

This document specifies the requirements for plastics, rubber, coatings, etc. under six special environmental conditions. dry heat, dry hot desert, plateau, humid heat, humid hot ocean, and cold.

Artificial simulation test methods and guidelines for polymer materials.

This document is applicable to assessing the environmental adaptability of polymer materials used under special environmental conditions.

2 Normative references

GB/T 2423.1

GB/T 2423.2

GB/T 2423.3

GB/T 2423.4

GB/T 2423.16

GB/T 2423.17

GB/T 2423.22

GB/T 2423.27

GB/T 2423.37

GB/T 2423.65

GB/T 9286

GB/T 14522

GB/T 16422.2

GB/T 20625-2024

GB/T 32088

3 Terms and Definitions

The terms and definitions defined in GB/T 20625-2024 apply to this document.