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

GB/T 10593.2-2023

Replacing GB/T 10593.2-2012

**Method of the measuring environmental parameters for electric
and electronic products - Part 2: Salt mist**

电工电子产品环境参数测量方法 第2部分：盐雾

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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 2 of GB/T 10593 "Measurement Methods for Environmental Parameters of Electrical and Electronic Products". GB/T 10593 has been released The following parts.

3. Vibration data processing and induction. This document replaces GB/T 10593.2-2012 "Measurement Methods for Environmental Parameters of Electrical and Electronic Products Part

2. Salt Spray" and is consistent with Compared with GB/T 10593.2-2012, in addition to

structural adjustments and editorial changes, the main technical changes are as follows:

- a) Added the terms and definitions of "salt spray concentration" and "salt spray deposition" (see Chapter 3);
- b) Changed the term and definition of "salt spray deposition rate" (see Chapter 3);
- c) Added an "Overview" chapter (see Chapter 4);
- d) Changed the sampling and analysis methods for salt spray concentration measurement (see Chapter 5, Chapter 3 of the 2012 edition);
- e) Added the option of absorption tube "where the absorption tube contains a sand core structure" (see 5.3.2.2);
- f) Added the selection of wet candle absorption liquid, sampling device installation diagram and operating steps (see 6.2.2, Figure 3, 6.2.5);
- g) Changed the diagram of the wet candle sedimentation rate sampling device (see Figure 2, Figure 2 of the 2012 version);
- h) Added "dry slice method sampling" (see 6.3);
- i) Added a chapter on "Salt Spray Settlement Determination" (see Chapter 7);
- j) Added a chapter "Salt Spray Online Monitoring Method" (see Chapter 8);

1 Scope

GB/T 10593.2-2023 is the Chinese national standard on method of the measuring environmental parameters for electric and electronic products - part 2: salt mist, in the field of testing. The /T suffix marks it as a recommended standard: it is not compulsory by itself, but it becomes binding as soon as a contract, a tender or a customer specification calls it up - which in practice is how most foreign buyers meet it. It was issued on 6 August 2023 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 March 2024. Classification: ICS 19.040, CCS K04. This page is published from the official record of the standard held by the Chinese standards administration: the identification, the dates, the classification and the issuing body are taken from there. The clause text, the tables and the numeric limits are in the document itself, which is delivered complete in English translation.

This document describes the sampling, analysis and calculation of salt spray environmental parameters (salt spray concentration, salt spray deposition rate and salt spray deposition amount) for electrical and electronic products. calculation method. This document is applicable to the measurement of salt spray environment parameters in places where electrical and electronic products are used.

2 Normative reference documents

This document has no normative references.

3 Terms and definitions

The following terms and definitions apply to this document.

3.1 The space salt spray content in the atmospheric environment is characterized by the chloride ion concentration.

Note. The unit is milligrams per cubic meter (mg/m^3).

3.2 The free deposition amount of salt spray in the atmosphere per unit time on a specified area is characterized by the chloride ion deposition rate.

Note. The unit is milligrams per square meter day [$\text{mg}/(\text{m}^2 \cdot \text{d})$].

3.3 salt spray settlement of salt mist The amount of salt spray deposited in the atmosphere on a specified area is characterized by the chloride ion concentration.

Note. The unit is milligrams per square meter (mg/m^2).

4 Overview

The measurement of salt spray environmental parameters in this document includes the measurement of salt spray concentration, salt spray deposition rate and salt spray deposition amount. The method involves traditional aspiration method, wet candle method and dry film method, as well as online monitoring based on spectrophotometry, Mie scattering method and resistance method. For outdoor atmospheric environments where actual measurement is impossible, salt spray can be estimated. See Appendix A for specific methods. This document is for salt The impact of fog environment parameters on electrical and electronic products is classified. Please refer to Appendix B for specific classification.

5 Salt spray concentration measurement

5.1 Principles of sampling and analysis According to the physical properties of salt being easily soluble in water, when salt-containing gas enters an absorption tube filled with absorbent (deionized water), the salt is absorbed and dissolved, that is,