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

GB/T 2423.17-2024

Replacing GB/T 2423.17-2008

Environmental testing - Part 2: Test methods - Test Ka: Salt mist

环境试验 第2部分：试验方法 试验Ka：盐雾

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Foreword

This Document was drafted as per the rules specified in GB/T 1.1-2020 Directives for Standardization - Part

1.Rules for the Structure and Drafting of Standardizing Documents. This Document is Part

17 of GB/T 2423. The published parts of GB/T 2423 can refer to Annex NA. This Document replaced GB/T 2423.17-2008 Environmental Testing for Electric and Electronic Products - Part

2. Test Method - Test Ka. Salt Mist. Compared with GB/T 2423.17-2008, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications.

- a) Change the content of "Scope" (see Clause 1 of this Edition; Clause 1 of the 2008 Edition);
- b) Add "General" (see Clause 4 of this Edition);
- c) Change "salt mist" into "salt solution"; and change the content (see Clause 5 of this Edition; Clause 3 of the 2008 Edition);
- d) Change the content of "test equipment" (see Clause 6 of this Edition; Clause 2 of the 2008 Edition);
- e) Add a Clause on "Specimens" (see Clause 7 of this Edition);
- f) Adjust the content of "Notes" in the Clause on "Pre-conditioning" to the main text (see Clause 9 of this Edition; Clause 5 of the 2008 Edition);
- g) Add a Clause on "Arrangement of Test Specimens" (see Clause 10 of this Edition);
- h) Change "Conditional test" into "Operating Conditions"; and change the content (see Clause 11 of this Edition; Clause 6 of the 2008 Edition);
- i) Add a Clause on "Test duration" (see Clause 12 of this Edition);
- j) Change "Details to be given in the relevant specifications" into "Information to be given in the relevant specifications"; and change the content (see Clause 15 of this Edition; Clause 10 of the 2008 Edition);
- k) Change the content of "Test report" (see Clause 16 of this Edition; Clause 9 of the 2008 Edition). This Document equivalently adopted IEC 60068-2-11:2021 Environmental Testing - Part 2-11. Tests - Test Ka. Salt Mist. The following minimal editorial changes were made to this document.

1 Scope

GB/T 2423.17 specifies Test Ka, the salt mist test, the most widely used and most widely argued-about corrosion test there is. It is written into an enormous number of product specifications, and it is quoted in hours, 48, 96, 240, 480, 1000, as though the number alone meant something; it means something only because this standard fixes everything else. The document specifies the composition and concentration of the salt solution and its pH, the temperature of the chamber and of the saturator, the rate of deposition of the mist

and how it is measured, the construction and the operation of the chamber, the mounting and the orientation of the specimens and the spacing between them, the duration and the continuous or cyclic exposure, the recovery, rinsing and drying after the test, and the assessment of the specimens afterwards. It is aligned with IEC 60068-2-11. The 2024 edition replaces GB/T 2423.17-2008. For a manufacturer, a specification writer or a test house in China, this is the referenced procedure.

This Document specifies a test method for assessing the corrosion resistance of electrotechnical products components, equipment and materials in a salt mist environment.

2 Normative References

The provisions in following documents become the essential provisions of this Document through reference in this Document. For the dated documents, only the versions with the dates indicated are applicable to this Document; for the undated documents, only the latest version (including all the amendments) is applicable to this Document.

GB/T 2421-2020 Environmental testing - General and guidance (IEC 60068-1.2013, IDT)

3 Terms and Definitions

No terms and definitions are listed in this Document. ISO and IEC maintain terminological databases for use in standardization at the following addresses.

4 General

For equipment and components, Test Kb (IEC 60068-2-52) is considered to provide more realistic conditions and to provide means of assessment of individual items.

5 Salt Solution

5.1 Preparation of salt solution Dissolve a sufficient mass of sodium chloride in distilled or deionized water with a conductivity not higher than 20 $\mu\text{S}/\text{cm}$ at $25\text{ }^{\circ}\text{C} \pm 2\text{ K}$ to produce a concentration of $50\text{ g/l} \pm 5\text{ g/l}$.

5.2 pH adjustment If necessary, adjust the pH of the salt solution so that the pH of the sprayed solution collected within the test chamber is

7.2 at $25\text{ }^{\circ}\text{C} \pm 2\text{ K}$.

6 Test Apparatus

6.1 Test chamber The chamber for this test shall be constructed of such materials that will not influence the corrosive effects of salt mist.

6.2 Atomizers The atomizers used shall be of such a design and construction as to produce

a finely divided, wet, dense mist. The atomizers shall be made of material that is non-reactive to the salt solution.

7 Test Specimens

The number and type of test specimens, their shape and their dimensions shall be selected in accordance with the relevant specification.

8 Initial Measurements

The test specimens shall be visually examined and, if necessary, electrically and mechanically checked as required by the relevant specification.

9 Pre-Conditioning

The relevant specification shall specify the cleaning method to be applied immediately before the test.