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

GB 14773-2025

Replacing GB 14773-2007

**Safety technical requirements for hand-held electrostatic spray
guns and auxiliary device**

手持式静电喷枪及其辅助装置安全技术要求

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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 supersedes GB 14773-2007 "Safety Regulations for Coating Operations - Safety Technical Conditions for Electrostatic Spray Guns and Auxiliary Devices", and is consistent with... Compared with GB 14773-2007, apart from structural adjustments and editorial changes, the main technical changes are as follows:

- a) The scope of application has been changed, and the scope in which this document does not apply has been deleted (see Chapter 1, Chapter 1 of the.2007 edition);
- b) The definitions of the terms "electrostatic spray gun" and "auxiliary device" have been changed (see 3.1, 3.2, 3.1, 3.2 in the.2007 edition);
- c) The terms "spray gun controller," "low-voltage cable," and "high-voltage cable" and their definitions have been added (see 3.3, 3.4, and 3.5);
- d) The requirements for the conductive surface of the electrostatic spray gun handle have been changed (see 5.3,.2007 edition of 5.3);
- e) Increased safety requirements for low-voltage cables (see 5.4, 5.5);
- f) The requirement to indicate the maximum temperature rise value on the nameplate has been removed [see 6.6, 9.2d) in the.2007 edition];
- g) Requirements for relative humidity in the test environment, test objects, and test sequence have been added (see 7.1);

- h) The impact test height was changed (see 7.4, 7.3 in the 2007 edition);
- i) The drop test height has been changed (see 7.5, 7.4 in the 2007 edition);

1 Scope

GB 14773 covers the hand-held electrostatic spray gun, a tool that deliberately puts tens of kilovolts on the atomised paint to make it wrap round the workpiece - inside an atmosphere of flammable solvent vapour, and in an operator's hand. The standard sets the general requirements, the mechanical structure safety requirements, the electrical safety requirements including the limitation of the discharge energy and the earthing of the operator and the workpiece, the test requirements and the information to be supplied for use. Issued on 31 October 2025, in force since 1 May 2026, replacing GB 14773-2007. 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 edition it replaces are taken from there. The clause text, the tables and the numeric limits are not reproduced on this page - they are in the document itself, which is delivered in full in English translation.

This document specifies the general requirements, mechanical structure, electrical safety requirements, and usage instructions for handheld electrostatic spray guns and their auxiliary devices. The information describes the corresponding experimental methods. This document applies to the design, manufacture, testing, inspection, and use of various handheld electrostatic spray guns, electrostatic powder spray guns, and their auxiliary devices. maintain.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included. For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies. This document.

GB/T 3836.1 Explosive Atmospheres - Part

3 Terms and Definitions

The terms and definitions defined in GB/T 3836.1 and the following terms and definitions apply to this document.

3.1 A spray gun that uses electrostatic working principle to spray liquid and powder coatings. Note

1. Typically includes the housing, electrostatic discharge device, mist control device, paint channel, air channel, high-pressure generator (built into the spray gun), and adjusting manipulator. Structure, etc. Note

2. When the high-pressure generator is built into the spray gun, it is considered part of the spray gun. Note

3. Electrostatic spray guns include electrostatic paint spray guns and electrostatic powder spray guns.

3.2 auxiliary device The necessary auxiliary equipment for supplying and controlling the working voltage, current, and atomizing coating of electrostatic spray guns. Note

1. Typically includes a spray gun controller, a high-pressure generator (external to the spray gun), a paint atomizing device, a paint supply device, high and low voltage cables, and a drive motor. And pneumatic motors, etc. Note

2. When the high-pressure generator is externally mounted on the spray gun, it is classified as part of the auxiliary device.

3.3 spray gun controller A device for controlling the high-voltage electrostatic output of an electrostatic spray gun and for coating spraying.

3.4 low voltage cable The high-voltage generator contains a built-in spray gun with a cable for connecting the electrostatic spray gun and the spray gun controller.