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

GB 46759-2025

Safety specification for electro-deposition

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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. Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents. This document was proposed and is under the jurisdiction of the Ministry of Emergency Management of the People's Republic of China. Electrophoretic Coating Safety Standards

1 Scope

GB 46759-2025 is the Chinese national standard on safety specification for electro-deposition, in the field of environment and health protection, safety. It carries no /T suffix, which in the Chinese system means compliance is mandatory: a product or a practice within its scope has to meet it to be lawfully made, sold or carried out in China. It was issued on 31 October 2025 by the State Administration for Market Regulation; Standardization Administration of China, and has been in force since 1 August 2026. Classification: ICS 13.100, CCS C 67. 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 specifies the general requirements for cathodic electrophoretic coating, equipment and facilities, and safety requirements for the storage, transportation, operation, and maintenance of electrophoretic coatings. The verification method is described. This document applies to the design, manufacture, installation, use, maintenance and management of cathodic electrophoretic coating processes and equipment.

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 4387 Safety Regulations for Railway and Road Transportation within Industrial Enterprises

GB 6514 Safety Regulations for Painting Operations. Safety of Painting Processes and Ventilation

GB/T 14441 Safety Terminology for Painting Operations

GB 39800.1 Specifications for the Configuration of Personal Protective Equipment Part

3 Terms and Definitions

The terms and definitions defined in GB/T 14441 and the following terms and definitions apply to this document.

3.1 Electro-deposition coating Electrophoretic coating An external electric field is used to direct the migration of pigment and resin particles suspended in the electrophoresis solution and deposit them onto the substrate surface of the workpiece (cathode). Painting method.

3.2 Electro-deposition area A dedicated area and other specific spaces for electrophoretic coating operations.

Note. Its scope includes the work area of electrophoresis tanks, transfer tanks, platforms and other related auxiliary equipment involved in electrophoretic coating.

3.3 Electro-deposition tank A specialized tank capable of performing electrophoretic coating operations.

3.4 A closed ultrafiltration system consisting of an ultrafiltration unit, an electrophoretic coating tank, and a post-rinsing device.

4 General Requirements

4.1 The passageways and entrances/exits of the electrophoretic coating area and its work site should be unobstructed and clearly marked.