ICS 31.030
CCS L 90

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB/T 28859-2025

Replacing GB/T 28859-2012

Epoxy powder encapsulation material for electronic packaging

电子封装用环氧粉末包封料

Issued on: August 1, 2025 **Implemented on: February 1, 2026**

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

Table of Contents

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 replaces GB/T 28859-2012 "Epoxy Powder Encapsulants for Electronic Components" and GB/T 28861-2012 "Epoxy Powder Test method for melt flowability of encapsulating materials". Compared with GB/T 28859-2012 and GB/T 28861-2012, in addition to structural adjustments and editorial In addition to the modifications, the main technical changes are as follows.

a) Added terms and definitions (see Chapter 3);

b) The product classification has been changed (see Chapter 4, 3.1 of GB/T 28859-2012);

c) Deleted composition and materials (3.2 of GB/T 28859-2012);

d) The properties of the encapsulating material powder have been changed (see 5.1, 4.1 of GB/T 28859-2012);

e) The properties of the cured encapsulant have been changed (see 5.2, 4.2 of GB/T 28859-2012);

f) The equipment, test steps and results of softening point (Kofler hot plate method) have been changed (see 6.1.3, GB/T 28859-2012 5.1.3);

g) Modified the flowability test method, sample preparation, test procedures, and test report (see 6.1.6 and Appendix B, GB/T 28859-2012 5.1.6, Chapter 5 to Chapter 8 of GB/T 28861-2012);

h) The inspection requirements for cured products have been changed (see 6.2, 5.2 of GB/T 28859-2012);

i) The insulation resistance description and reference documents have been changed (see 6.2.3, 5.2.3 of GB/T 28859-2012);

j) The reference document for glass transition temperature has been changed (see 6.2.5, 5.2.5 of GB/T 28859-2012);

k) The description of temperature shock resistance has been changed (see 6.2.9, 5.2.9 of GB/T 28859-2012);

l) The test method for hardness has been changed (see 6.2.10, 5.2.10 of GB/T 28859-2012);

m) Added "Flexural Strength", "Flexural Modulus", "Thermal Conductivity", "Electrical Conductivity", "Comparative Tracking Index (CTI)" and "Volume Resistivity" Test method (see 6.2.11 to 6.2.15);

n) The identification inspection and quality consistency inspection items and sampling descriptions have been changed (see 7.2, 7.3, and 6.2, 6.3 of GB/T 28859-2012);

o) The requirements for packaging, labeling, storage and transportation have been changed (see Chapter 8 and Chapter 7 of GB/T 28859-2012).

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 was proposed and coordinated by the National Technical Committee for Semiconductor Equipment and Materials Standardization (SAC/TC203).

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

- First published in 2012 as GB/T 28859-2012 and GB/T 28861-2012;

- This is the first revision.

1 Scope

This document specifies the product classification, requirements, inspection rules and packaging of epoxy powder encapsulants for electronic packaging (hereinafter referred to as "encapsulants").

It also describes the requirements for packaging, labeling, storage and transportation, and the corresponding test methods.

This document applies to electronic components such as ceramic capacitors, varistors, film capacitors, resistor networks, thermistors, etc.

Encapsulation is done with epoxy powder encapsulant.

2 Normative references

GB/T 1034-2008

GB/T 1408.1

GB/T 1409-2006

GB/T 1636

GB/T 2411

GB/T 3139

GB/T 4207-2022

GB/T 4722-2017

GB/T 5169.16-2017

GB/T 6003.1

GB/T 9341

GB/T 21782.9

GB/T 26572

GB/T 28858-2012

GB/T 28860

GB/T 28862

GB/T 31838.2

GB/T 31838.4

GB/T 36800.2

GB/T 40564-2021

3 Terms and Definitions

There are no terms or definitions that require definition in this document.