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

GB/T 44656-2024

**Specification of polymer-bonded anisotropic ferrite permanent
magnetic compounds for injection molding**

注射成型各向异性铁氧体永磁复合颗粒技术条件

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Table of Contents

1 Scope	1
2 Normative references	1
3 Terms and Definitions	1
4 Classification and brand	1
4.1 Classification	1
4.2 Grade	2
5 Technical Requirements	2
5.1 Appearance	2
5.2 Magnetic properties	2
5.3 Mechanical and physical properties	3
6 Test methods	3
6.1 Appearance Inspection	3
6.2 Magnetic properties	4
6.3 Mechanical and physical properties	4
7 Inspection Rules	4
7.1 Batch	4
7.2 Inspection Items	4
7.3 Sampling	4
7.4 Determination of test results	5
8 Marking, packaging, transportation, storage and quality certificate	5
8.1 Sign	5
8.2 Packaging	5
8.3 Transportation and storage	5
7 Appendix C (Informative) Auxiliary magnetic properties of injection molded anisotropic ferrite permanent magnet composite particles	8

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. 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

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1 Scope

GB/T 44656-2024 specifies the polymer-bonded anisotropic ferrite compounds used for injection moulding permanent magnets. Injection moulding lets a magnet be produced in a complex shape, with insert-moulded features and tight tolerances, at a cost sintering cannot match; making it anisotropic - aligning the ferrite particles in a field as the melt fills the cavity - roughly doubles the energy product but makes the compound's flow behaviour and particle loading critical, since a compound that is too filled will not orient and one that is not filled enough is weak. The standard sets the classification and grades, the technical requirements covering appearance, magnetic properties and mechanical and physical properties, the test methods for each, and the inspection rules and packaging, marking, transport and storage provisions. It takes effect on 1 April 2025.

This document defines the terminology of injection molded anisotropic ferrite permanent magnet composite particles, gives the classification and grade, and specifies the injection molding The technical requirements, inspection rules, marking, packaging, transportation, storage and quality certificate of anisotropic ferrite permanent magnet composite particles are described. Corresponding test methods. This document applies to anisotropic ferrite permanent magnet composite particles used in injection molded magnets.

2 Normative references

The contents of the following documents constitute essential clauses of this document through normative references in this document. For referenced documents without a date, only the version corresponding to that date applies to this document; for referenced documents without a date, the latest version (including all amendments) applies to This document.

GB/T 1033.1 Plastics - Determination of density of non-cellular plastics - Part

3 Terms and definitions

The terms and definitions defined in GB/T 9637 and the following apply to this document.

3.1 Anisotropic ferrite powder is used as the matrix, thermoplastic resin is used as the binder, and appropriate amount of additives are added. After granulation, it is used for injection molding. Composite functional materials.

4 Classification and brand

4.1 Classification Materials are classified according to the type of thermoplastic resin and divided into several grades according to the maximum magnetic energy product.