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

GB/T 26649-2025

Replacing GB/T 26649-2011

Magnesium alloy castings for automobile wheels

镁合金汽车车轮铸件

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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 replaced GB/T 26649-2011 Magnesium Alloy Castings for Automobile Wheels.

Compared with GB/T 26649-2011, the major technical changes of this Document are as follows besides the structural adjustments and editorial modifications.

- a) Change the scope (see Clause 1 of this Edition; Clause 1 of the 2011 Edition);
- b) Delete the terms and definitions of magnesium alloy castings for automobile wheels (see 3.1.1 of the 2011 Edition);
- c) Change the chemical composition (see 4.1 of this Edition; 4.1.1 of the 2011 Edition);
- d) Change the mechanical property requirements (see 4.2 of this Edition; 4.1.2 of the 2011 Edition);
- e) Change the dimensional and geometric tolerance requirements (see 4.3 of this Edition; 4.2 of the 2011 Edition);
- f) Change the internal quality requirements (see 4.4 of this Edition; 4.4 of the 2011 Edition);
- g) Change the surface quality requirements (see 4.5 of this Edition; 4.3 of the 2011 Edition);
- h) Change the test methods on chemical composition (see 5.1 of this Edition; 5.1.1 of the 2011 Edition);

- i) Add test methods on dimensional and geometric tolerance (see 5.3 of this Edition);
- j) Change test methods on internal quality (see 5.4 of this Edition; 5.3 of the 2011 Edition);
- k) Change batching (see 6.1 of this Edition; 6.2 of the 2011 Edition);
- l) Change inspection items (see 6.2 of this Edition; 6.1.1 of the 2011 Edition);
- m) Add sampling provisions (see 6.3 of this Edition);
- n) Change result judgment (see 6.4 of this Edition; 6.1.2 of the 2011 Edition);
- o) Changed marking, quality certificate, packaging, transportation, and storage requirements (see Clause 7 of this Edition; Clause 7 of the 2011 Edition).

Please note some contents of this Document may involve patents. The issuing agency of this Document shall not assume the responsibility to identify these patents.

Magnesium Alloy Castings for Automobile Wheels

1 Scope

This Document specifies the technical requirements, test methods, inspection rules and marking, quality certificate, packaging, transportation, and storage of magnesium alloy castings for automobile wheels.

This Document applies to the production and inspection of magnesium alloy castings for automobile wheels (hereinafter referred to as castings).

2 Normative References

GB/T 228.1

GB/T 231.1

GB/T 2933

GB/T 5611

GB/T 6414-2017

GB/T 13748.21

21 Determination of elements by photoelectric direct reading atomic emission

spectrometry GB/T 39638 X-ray digital radiographic testing for casting

3 Terms and Definitions

For the purposes of this Document, the terms and definitions given in GB/T 2933 and GB/T 5611 apply.

4.1 Chemical compositions

The chemical compositions of the castings shall meet the requirements of Table 1.

4.2 Mechanical properties

After T6 (solution treatment + full artificial aging) heat treatment, the mechanical properties of the casting shall conform to the provisions of Table 2.

4.3 Dimensional and geometric tolerances

4.3.1 The dimensional and geometric tolerances of castings shall meet the requirements of the drawings.

4.3.2 The dimensional tolerances not specified shall conform to the provisions of Grades

DCTG7 to DCTG9 in GB/T 6414-2017. The geometric tolerances not specified shall conform to the provisions of Grades GCTG3 to GCTG5 in GB/T 6414-2017. If there are special requirements, they shall be indicated on the drawings.

4.4 Internal quality

Internal defects of castings shall comply with the provisions of Appendix A, and the allowable grades shall meet the requirements of Table 3.

4.5 Surface quality

4.5.1 The surface of the casting shall be smooth and free of scars, undercasting, cracks, porosity, holes, cold shuts, and damage that could affect strength.

4.5.2 The tire mounting surface and the area around the valve hole of the casting shall be free of defects that could damage the outer or inner tube or affect the function of the valve cock.

4.5.3 Casting defects within the machining allowance are permitted.

5.1 Chemical compositions

The test methods for chemical compositions shall be in accordance with the provisions of GB/T 13748.21.

5.2 Mechanical properties

5.2.1 The tensile test methods shall be in accordance with the provisions of GB/T 228.1.

5.2.2 The hardness test methods shall be in accordance with the provisions of GB/T 231.1.

5.3 Dimensional and geometric tolerances

The dimensional and geometric tolerances of castings shall be inspected using testing tools that meet the required accuracy.

5.4 Internal quality

Internal defects of castings shall be detected by X-ray nondestructive testing; the test methods shall be in accordance with the provisions of GB/T 39638.

5.5 Surface quality

The surface quality of castings shall be inspected visually.

6.1 Batching

Castings of the same designation, produced continuously on the same casting equipment, with the same mold set, and in the same heat treatment furnace during the same shift are considered a batch. Batching under special circumstances shall be determined by agreement between the supplier and the purchaser.

6.2 Inspection items

Inspection is divided into exit-factory inspection and type inspection. The inspection items for castings for exit-factory inspection and type inspection are shown in Table 4.