

ICS 77.120.20
CCS H 61

YS

**NONFERROUS METALS INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

YS/T 1159-2016

**Magnesium-lithium alloy sheets
(English Translation)**

Issued on: July 11, 2016

Implemented on: January 1, 2017

**Issued by: Ministry of Industry and Information Technology of the
People's Republic of China**

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1 Scope

This Standard specifies the requirements, test methods, inspection rules and marks, packaging, transportation, storage and quality certificate and order (or contract) content of magnesium-lithium alloy sheets.

This Standard applies to magnesium-lithium alloy sheets (hereinafter referred to as sheets).

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

GB/T 228.1, Metallic materials -- Tensile testing -- Part 1. Method of test at room temperature

GB/T 4340.1, Metallic materials -- Vickers hardness test -- Part 1. Test method

GB/T 8170, Rules of rounding off for numerical values and expression and judgement of limiting values

GB/T 13748 (all parts), Chemical analysis methods of magnesium and magnesium alloys

GB/T 17432, Methods of sampling for analyzing the chemical composition of wrought aluminum and aluminum alloys

GB/T 33141, Magnesium lithium alloys ingots

3.1.1 Designation, condition and dimensional specifications

The designation, condition and dimensional specifications of the product shall comply with the requirements in Table 1. If the purchaser requires other designations and sizes, it shall be specified in the order sheet (or contract) after negotiation between the supplier

4.2.4 Dimensional measurements do not allow for rounding.

4.3 Mechanical properties

4.3.1

The tensile test at room temperature is carried out in accordance with the provisions of GB/T 228.1.

4.3.2

The hardness test is carried out in accordance with the provisions of GB/T 4340.1.

4.4 Appearance quality

Visually inspect appearance quality. Dimensional measuring tools can be borrowed if necessary.

5.1 Inspection and acceptance

5.1.1

Products shall be inspected by the supplier's technical (quality) supervision department to ensure that product quality complies with the provisions of this Standard and the order sheet (or contract). A quality certificate shall be filled out by the supplier's technical (quality) supervision department.

5.1.2

The purchaser shall inspect the received products in accordance with the provisions of this Standard. If the inspection results are inconsistent with the provisions of this Standard or the order sheet (or contract), it shall be submitted to the supplier in writing, and the matter shall be resolved through negotiation between the supplier and the purchaser. Objections related to appearance quality and size deviations shall be raised within ten days from the date of receipt of the product. Objections related to other requirements shall be raised within two months from the date of receipt of the product.

If arbitration is required, the supplier and the purchaser shall jointly conduct arbitration sampling on the purchaser's.

5.2 Batching

Products shall be submitted for inspection in batches. Each batch shall consist of products of the same designation, condition and size. There is no limit on the batch weight, or it can be determined by negotiation between the supplier and the purchaser.

5.3 Inspection items

Each batch of products shall be inspected for chemical composition, dimensional deviation, mechanical properties, appearance quality and items required for batch inspection in the order sheet (or contract) before leaving the factory.

5.4.1 Specimens for chemical composition analysis

It shall be carried out in accordance with the provisions of GB/T 17432.

5.4.2 Specimens for dimensional deviation inspection

Inspect piece by piece.

5.4.3 Specimens for mechanical property inspection

5.4.3.1

For specimens used for strength and elongation tests, one specimen shall be taken from each batch and shall comply with the provisions of GB/T 228.1.

5.4.3.2

For specimens used for hardness test, one specimen shall be taken from each batch and shall comply with the requirements of GB/T 4340.1.

5.4.4 Sampling for appearance quality inspection

The appearance quality shall be inspected piece by piece.

5.5.1 If the chemical composition fails, the batch of products will be deemed unqualified.

5.5.2 If the dimensional deviation fails, the piece will be deemed unqualified.

5.5.3 When the tensile property at room temperature test result fails, double the number of specimens from the batch of products shall be taken to repeat the test. If all repeated test results are qualified, the entire batch of products will be deemed qualified. If there are still unqualified products, the batch of products will be deemed to be unqualified.

5.5.4 If the hardness test result is unqualified, it will be handled through negotiation

between the supplier and the purchaser.

5.5.5 When the appearance quality is unqualified, the sheet will be deemed unqualified.

The rest of the sheets will be inspected piece by piece, and those that pass will be delivered.

6 Weight

Sheets are weighed using a check-weight system.

7.1 Marks

The surface of the product shall be clearly marked with the manufacturer's logo, product name, designation, condition, dimensions, batch number (sheet number), net weight, reference to this Standard and the inspection seal of the supplier's inspection and supervision department.

7.2 Packaging, shipping, storage

7.2.1

Each sheet shall be wrapped in plastic film or moisture-proof paper. The sheets must not be left exposed. It can then be packed in wooden crates made of wood, fibreboard or plywood. The packaging box shall be dry. There are two layers of oil- impregnated paper placed above and below the stack of sheets in the box.

7.2.2

Products shall be shipped clean, dry, and free of contaminants. During transportation, rain and snow shall be protected to ensure that the packaging box is not corroded. It shall not be transported in the same vehicle with chemically active substances, wet materials and flammable materials. Appropriate loading and unloading methods shall be adopted to prevent damage to the packaging box during transportation.

7.2.3

After receiving the product, the purchaser shall promptly store the product in a clean, dry, non-corrosive atmosphere, free of rain and snow intrusion, chemically active substances, moist materials and flammable items. Products shall be inspected for corrosion within 10 days and acceptance shall be organized. Sheets stored for a long time shall be treated with anti-corrosion regularly.

7.3 Quality certificate

Each batch of products shall be accompanied by a quality certificate indicating the following.