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

GB/T 2085-1989

Replacing GB/T 2085.1-2007

**Aluminium powder - Part 1: Air atomized aluminium powder
(English Translation)**

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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.

This document is Part 1 of GB/T 2085 "Aluminum Powder". GB/T 2085 has the following parts published.

---Part 1: Air-atomized aluminum powder;

---Part 2: Ball Milled Aluminum Powder;

---Part 3: Crushing Aluminum Powder;

---Part 4: Nitrogen atomization of aluminum powder.

This document supersedes GB/T 2085.1-2007 "Aluminum Powder Part 1: Air-Atomized Aluminum Powder" and is consistent with GB/T 2085.1-2007.

Compared to previous versions, aside from structural adjustments and editorial changes, the main technical changes are as follows.

- a) Added grades FLPA3000, FLPA71A, and FLPA71B (see 4.2);
- b) The units for particle size distribution and the particle size distribution of FLPA140 have been changed (see 5.1, 3.2 of the 2007 edition);
- c) The chemical composition requirements have been changed (see 5.2, 3.3 of the 2007 edition);
- d) Moisture requirements have been changed (see 5.3, 3.3 in the 2007 edition);
- e) The test method requirements have been changed (see Chapter 6, Chapter 4 of the 2007 edition);
- f) Added requirements for judging the results of appearance quality inspection (see 7.5.4);
- g) Packaging requirements have been changed (see 8.2, 6.1 of the 2007 edition).

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 by the China Nonferrous Metals Industry Association.

This document is under the jurisdiction of the National Technical Committee on Standardization of Nonferrous Metals (SAC/TC243).

1 Scope

This document specifies the grades and typical uses, technical requirements, inspection rules, marking, packaging, transportation, storage, and accompanying materials of air-atomized aluminum powder.

The documents and order details describe the testing methods.

This document applies to the production of air-atomized aluminum powder (hereinafter referred to as "aluminum powder") for use in metallurgy, chemical industry, refractory materials, explosives, fireworks, and welding.

Production and delivery.

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4.1 Designation Method

4.1.1

Aluminum powder grades are represented by "FLPA" followed by 2 to 4 Arabic numerals and then 1 English letter.

4.1.2

The "FLPA" in the grade designation is the identification code for aluminum powder.

4.1.3

The last 2 to 4 Arabic numerals of the identification code represent the maximum aperture of the sieve selected for the aluminum powder sieving test.

4.1.4

The letters at the end of the grade designation are difference identifiers. When the maximum aperture of the selected sieves is the same, differences in particle size distribution and...

(or) Different powders with different physical properties such as bulk density. Examples are as follows.

5.1 Particle size distribution and loose packing density

The particle size distribution and loose packing density of aluminum powder should conform to the specifications in Table 2. If the purchaser has specific requirements for particle size distribution and loose packing density, these requirements shall be determined by both the supplier and the purchaser.

The two parties agreed on the terms and the agreement was noted in the order form.

5.3 Moisture

The moisture content (mass fraction) of aluminum powder should not exceed 0.1%.

5.4 Appearance Quality

5.4.1

Aluminum powder is silver-gray or gray.

5.4.2

The aluminum powder should be free of inclusions and lumps.

6 Test Methods

6.1

The particle size distribution of aluminum powder was determined according to the method in Appendix B.

6.2

The loose density of aluminum powder shall be determined according to the method in Appendix C.

6.3

The active aluminum content of aluminum powder shall be determined according to the method in Appendix D. Other chemical composition analyses of aluminum powder shall be performed according to GB/T 20975 (all parts).

The procedure shall be carried out in accordance with the provisions of (points).

6.4

The moisture content of aluminum powder shall be determined according to the method in Appendix E.

6.5

The appearance quality of aluminum powder shall be inspected visually.

7.1 Inspection and Acceptance

7.1.1

The supplier shall inspect the products to ensure that the product quality meets the requirements of this document and the purchase order, and fill out a quality certificate.

7.1.2

The buyer shall inspect the received products in accordance with the provisions of this document. If the inspection results do not conform to the provisions of this document or the purchase order, the buyer shall...

Objections should be submitted to the supplier in writing and resolved through negotiation between the supplier and the buyer. Objections concerning appearance quality and particle size distribution should be raised within one year of receipt of the product.

Objections should be raised within one month of receipt of the product. Objections concerning other performance aspects should be raised within three months of receipt.