Designation: A1025/A1025M – 10 (Reapproved 2020)

Standard Specification for Ferroalloys and Other Alloying Materials, General Requirements[1]

This standard is issued under the fixed designation A1025/A1025M; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon (ε) indicates an editorial change since the last revision or reapproval.

1. Scope

1.1 This specification covers a group of common requirements that, unless otherwise specified in an individual specification, shall apply to ferroalloys and other alloying materials under each of the following ASTM specifications:

Title of Specification	ASTM Designation
Ferromanganese	A99
Ferrosilicon	A100
Ferrochromium	A101
Ferrovanadium	A102
Ferromolybdenum	A132
Molybdenum Oxide Products	A146
Ferroboron	A323
Ferrotitanium	A324
Chromium Metal	A481
Ferrochrome-Silicon	A482/A482M
Silicomanganese	A483/A483M
Calcium-Silicon Alloys	A495
Ferrocolumbium	A550
Electrolytic Manganese Metal	A601/A601M
Nickel Oxide Sinter	A636
Ferromanganese Silicon	A701/A701M
Titanium Scrap for Use in Deoxidation and Alloying of Steel	A845
Aluminum Scrap for Use in Deoxidation and Alloying of Steel	A846
Silicon Metal	A922

1.2 This specification also covers a group of supplementary requirements which may be applied to the above specifications as indicated therein. These are provided for use when additional testing or inspection is desired and apply only when specified individually by the purchaser in the order.

1.3 In case of conflict between the requirements of the individual specification and this general specification, the former shall prevail.

1.4 *Units*—The values stated in either SI units or inch-pound units are to be regarded separately as standard. The values stated in each system may not be exact equivalents; therefore, each system shall be used independently of the other. Combining values from the two systems may result in nonconformance with the standard.

1.4.1 This specification is expressed in both inch-pound units and in SI units (within the text, the SI units are shown in brackets); however, unless the purchase order or contract specifies the applicable M specification designation (SI units), the inch-pound units shall apply.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use.*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A99 Specification for Ferromanganese
A100 Specification for Ferrosilicon
A101 Specification for Ferrochromium
A102 Specification for Ferrovanadium
A132 Specification for Ferromolybdenum
A146 Specification for Molybdenum Oxide Products
A323 Specification for Ferroboron
A324 Specification for Ferrotitanium
A481 Specification for Chromium Metal
A482/A482M Specification for Ferrochrome-Silicon
A483/A483M Specification for Silicomanganese
A495 Specification for Calcium-Silicon Alloys
A550 Specification for Ferrocolumbium (Ferroniobium)
A601/A601M Specification for Electrolytic Manganese Metal
A610 Test Methods for Sampling and Testing Ferroalloys for

[1] This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloysand is the direct responsibility of Subcommittee A01.18 on Castings.

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[2] For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

Determination of Size
A636 Specification for Nickel Oxide Sinter
A701/A701M Specification for Ferromanganese-Silicon
A845 Specification for Titanium Scrap for Use in Deoxidation and Alloying of Steel (Withdrawn 2005)[3]
A846 Specification for Aluminum Scrap for Use in Deoxidation and Alloying of Steel (Withdrawn 2005)[3]
A922 Specification for Silicon Metal
E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
E32 Practices for Sampling Ferroalloys and Steel Additives for Determination of Chemical Composition

3. Ordering Information

3.1 Orders for material should include the following as required, to describe the material adequately:
3.1.1 ASTM designation and year of issue,
3.1.2 Grade of material,
3.1.3 Size of material,
3.1.4 Quantity,
3.1.5 Packaging requirements, and
3.1.6 Supplementary requirements desired, including the standards of acceptance.

4. Chemical Analysis

4.1 The chemical analysis method shall be agreed upon by the purchaser and supplier.

4.2 The manufacturer shall furnish a certificate referencing the chemical analysis and appropriate supplementary requirements in the material specification.

4.3 For purposes of determining conformance with this specification, the reported analysis shall be rounded to the nearest unit in the last right-hand place of figures used in expressing the limiting value, in accordance with the rounding method of Practice E29.

[3] The last approved version of this historical standard is referenced on www.astm.org.

5. Sampling

5.1 Unless otherwise specified, the material shall be sampled for determination of chemical composition in accordance with Practices E32 and for determination of size in accordance with Test Methods A610.

5.2 In the case of a discrepancy, Practices E32 or Test Methods A610, as applicable, shall be used for referee.

6. Inspection

6.1 The manufacturer shall afford the inspector representing the purchaser all reasonable facilities, without charge, to satisfy the purchaser that the material is being furnished in accordance with the material specification.

7. Rejection

7.1 Any rejections based on tests made in accordance with the material specification shall be reported to the manufacturer within 45 days from receipt of material by the purchaser.

8. Certification

8.1 The manufacturer's certification shall be furnished to the purchaser at the time of shipment stating that the material was manufactured, sampled, tested, and inspected in accordance with the material specification and was found to meet the requirements.

9. Packaging and Package Marking

9.1 Each lot/shipment shall be identified with appropriate identification showing the material, the ASTM designation, the size, the lot number, and name brand or trademark.

9.2 When the shipment is made in containers, each shall be marked on the container or on a label or tag attached to the container.

10. Keywords

10.1 alloying materials; ferroalloy; general requirements

SUPPLEMENTARY REQUIREMENTS

The following standardized supplementary requirements are for use when desired by the purchaser and when allowed by and listed in the individual specifications. They shall not apply unless specified in order, in which event the specified tests shall be made by the manufacturer before shipping.

S1. Supplementary Chemical Requirements

S1.1 Restrictions on the chemical requirements shall be agreed upon by the purchaser and supplier.

S2. Size

S2.1 Screened products shall conform to the sizes given in Table S2.1.

S2.2 The sizes listed in Table S2.1 are typical as shipped from the manufacturer's plant. The size and friability of the product shall be agreed upon by the purchaser and supplier.

NOTE S1—Ferroalloys exhibit varying degrees of friability; therefore, some attrition may be expected in transit and handling. A quantitative test is not available for rating friability of ferroalloys. A code system has been developed for this purpose, and a number rating for each product type is given.