Designation: A701/A701M – 10 (Reapproved 2015)

Standard Specification for Ferromanganese-Silicon[1]

This standard is issued under the fixed designation A701/A701M; 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 manganese-silicon alloy.

1.2 *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 non-conformance with the standard.

1.2.1 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.

2. Referenced Documents

2.1 *ASTM Standards:*[2]

A1025 Specification for Ferroalloys and Other Alloying Materials, General Requirements

3. General Conditions for Delivery

3.1 Materials furnished to this specification shall conform to the requirements of Specification A1025, including any supplementary requirements that are indicated in the purchase order. Failure to comply with the general requirements of Specification A1025 constitutes nonconformance with this specification. In case of conflict between the requrements of this specification and Specification A1025, this specification shall prevail.

4. Chemical Requirements

4.1 The alloy shall conform to the chemical requirements as specified in Table 1 and Table 2.

4.2 The manufacturer shall furnish an analysis of each shipment showing the percentage of each element specified.

5. Size

5.1 The alloy is available in the sizes shown in Table 3.

5.2 The sizes listed in Table 3 are typical of the product as shipped from the seller's plant. Some deterioration of size can be expected in transit.

6. Chemical Analysis

6.1 Chemical methods are subject to agreement between the purchaser and supplier.

6.2 *Special Analysis Requirements*—Analysis for additional elements other than those listed in Tables 1 and 2 shall be agreed upon between the purchaser and the manufacturer. Such elements in trace quantities shall be reported as less than "<" the limit of analytical equipment. This shall be agreed upon between the purchaser and the manufacturer.

7. Keywords

7.1 Ferromanganese-silicon

[1] This specification is under the jurisdiction of ASTM Committee A01 on Steel, Stainless Steel and Related Alloys and 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.

***A Summary of Changes section appears at the end of this standard**

TABLE 1 Chemical Requirements

Element	Composition, %
Manganese	63 to 66
Carbon, max	0.08
Silicon	28 to 32
Phosphorus, max	0.05

TABLE 2 Specified Residual Elements

Element	Composition, max, %
Arsenic	0.15
Tin	0.010
Lead	0.050
Chromium	0.50

TABLE 3 Sizes

Sizes	Tolerance
75 lb by 2 in. [35 kg by 50 mm]	
50 lb by 1 in. [23 kg by 25 mm]	
6 by ½ in. [150 mm by 15 mm]	
3 in. by down [75 mm by down]	10 % passing ¼ in. [5 mm] screen, max
2 in. by down [50 mm by down]	10 % passing ¼ in. [5 mm] screen, max

SUMMARY OF CHANGES

Committee A01 has identified the location of selected changes to this standard since the last issue (A701 – 05 (2010) that may impact the use of this standard. (Approved Oct. 1, 2010.)

(1) 1.2 added.

(2) Table 3 revised.