



Standard Specification for Silicomanganese¹

This standard is issued under the fixed designation A 483; 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 three grades of silicomanganese designated A, B, and C.

2. Referenced Documents

2.1 *ASTM Standards*:

E 11 Specification for Wire-Cloth Sieves for Testing Purposes²

E 29 Practice for Using Significant Digits in Test Data to Determine Conformance With Specifications²

E 31 Methods for Chemical Analysis of Ferroalloys³

E 32 Practices for Sampling Ferroalloys and Steel Additives for Determination of Chemical Composition³

3. Ordering Information

3.1 Orders for material under this specification shall include the following information:

3.1.1 Quantity,

3.1.2 Name of material,

3.1.3 ASTM designation and year of issue,

3.1.4 Grade,

3.1.5 Size, and

3.1.6 Requirements for packaging, analysis reports, etc. as appropriate.

3.2 The customary basis of payment for silicomanganese is per pound of ferroalloy, rather than per pound of contained manganese or silicon.

4. Chemical Composition

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

4.2 The manufacturer shall furnish an analysis of each shipment showing the manganese, silicon, and carbon content and, when required, such of the other elements as are specified in Table 1.

4.3 The values shown in Table 2 are expected maximums. Upon request of the purchaser, the manufacturer shall furnish

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² *Annual Book of ASTM Standards*, Vol. 14.02.

³ *Annual Book of ASTM Standards*, Vol. 03.05.

TABLE 1 Chemical Requirements^A

Element	Composition, %		
	Grade A	Grade B	Grade C
Manganese ^B	65.0–68.0	65.0–68.0	65.0–68.0
Silicon ^B	18.5–21.0	16.0–18.5	12.5–16.0
Carbon, max	1.5	2.0	3.0
Phosphorus, max	0.20	0.20	0.20
Sulfur, max	0.04	0.04	0.04

^AFor 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 Recommended Practice E 29.

^BFor purposes of determining the manganese and silicon content of any shipment, both elements shall be reported to the nearest 0.01 %, applying the same rounding procedure as prescribed in Footnote A.

an analysis for these elements on a cumulative basis over a period mutually agreed upon by the manufacturer and the purchaser.

5. Size

5.1 The various grades are available in sizes as listed in Table 3.

5.2 The sizes listed in Table 3 are typical as shipped from the manufacturer's plant. These alloys exhibit varying degrees of friability; therefore, some attrition may be expected in transit, storage, and handling.

6. Sampling

6.1 The material shall be sampled in accordance with Practices E 32.

6.2 Other methods of sampling mutually agreed upon by the manufacturer and the purchaser may be used; however, in case of discrepancy, Practices E 32 shall be used for referee.

TABLE 2 Supplementary Chemical Requirements^A

Composition, max, % All Grades	
Arsenic	0.10
Tin	0.010
Lead	0.030
Chromium	0.50
Nickel	0.20
Molybdenum	0.10

^AFor 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 Recommended Practice E 29.