



Designation: A 482 – 93 (Reapproved 2000)

Standard Specification for Ferrochrome-Silicon¹

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1. Scope

1.1 This specification covers two grades of ferrochrome-silicon designated A and B.

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

E 364 Test Methods for Chemical Analysis of Ferrochrome-Silicon⁴

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,

3.1.4 Grade,

3.1.5 Size, and

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

3.2 The basis of payment for ferrochrome-silicon may be per unit weight of alloy or per pound of contained chrome and 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 elements specified in Table 1.

¹ This specification is under the jurisdiction of ASTM Committee A-1 on Steel, Stainless Steel, and Related Alloys and is the direct responsibility of Subcommittee A01.18 on Castings.

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

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

⁴ *Annual Book of ASTM Standards*, Vol 03.06.

TABLE 1 Chemical Requirements

Element	Composition, %	
	Grade A	Grade B
Chromium	34.0–38.0	38.0–42.0
Carbon, max	0.060	0.050
Silicon	38.0–42.0	41.0–45.0
Sulfur, max	0.030	0.030
Phosphorus, max	0.030	0.030

4.3 The values shown in Table 2 are expected maximums. Upon request of the purchaser, the manufacturer shall furnish an analysis for any of these elements on a cumulative basis over a period mutually agreed upon between 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

TABLE 2 Supplementary Chemical Requirements^A

Element	Composition, max, percent Ferrochrome-Silicon (Grades A and B)
Nitrogen	0.050
Manganese	0.75
Nickel	0.50
Vanadium	0.50
Copper	0.050
Molybdenum	0.050
Columbium	0.050
Tantalum	0.050
Cobalt	0.10
Aluminum	0.50
Titanium	0.50
Zirconium	0.050
Arsenic	0.005
Lead	0.005
Tin	0.005
Zinc	0.005
Boron	0.005
Antimony	0.005
Silver	0.005
Bismuth	0.005

^AFor purposes of determining conformance with this specification, the reported analysis shall be rounded to the nearest unit in the right-hand place of figures used in expressing the limiting value, in accordance with the rounding method of Practice E 29.