

BRAMMER STANDARD COMPANY, INC.

CERTIFICATE OF ANALYSIS

50% FERROSILICON

REFERENCE MATERIALS

BS No.	140/1	140/2	140/3	140/4	BS No.
Si	45.20	51.85	47.20	49.80	Si
Fe	52.80	46.12	50.85	47.50	Fe
Mn	0.46	0.53	0.60	1.00	Mn
P	(0.02)	(0.02)	(0.02)	(0.02)	P
C	(0.03)	(0.03)	(0.05)	(0.05)	C
S	(0.004)	(0.004)	(0.004)	(0.004)	S
Cu	0.13	0.14	0.09	0.09	Cu
Ni	0.15	0.15	0.09	0.11	Ni
Cr	(0.25)	(0.25)	(0.18)	(0.19)	Cr
Ca	0.04	0.03	0.09	0.09	Ca
Al	0.68	0.62	0.59	0.90	Al
Ti	0.09	0.10	0.07	0.09	Ti

The certified data for Si, Fe, Mn, Cu, Ca, Al and Ti is the average of chemical analysis from the laboratories listed on the back side of this certificate. The uncertified data in parentheses is the average of instrumental analysis from only two laboratories and is provided for general information only.

CAUTION

For best results, thoroughly mix the ferroalloy material immediately before weighing. It is important to use various particle sizes when weighing. "Sampling of the sample" weighing techniques should be used. Pour approximately 5 g. of the material onto glazed paper and take small portions from various areas of the 5 g. sample when weighing for analysis.

Certificate No. 140-061587

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COOPERATING LABORATORY ANALYSIS was provided by:

Anderson Laboratories, Milwaukee, WI

Bowser-Morner Labs., Dayton, OH

Coors Lab., Golden, CO

Japan Inspection Co., Ltd., Tokyo, Japan

Andrew S. McCreath & Son, Harrisburg, PA

Union Carbide, Ashtabula, OH

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