National Institute of Standards & Technology

Certificate of Analysis

Standard Reference Material 347

Magnesium Ferrosilicon

(In Cooperation with the American Society for Testing and Materials)

This material is in the form of powder (0.1 to 0.2 mm) for use in checking chemical methods of analysis and in calibration with instrumental methods of analysis.

Element	Certified Value[1] Percent by Weight	Estimated Uncertainty[2]
Silicon	47.6	0.1
Magnesium	4.49	.15
Aluminum	0.78	.01
Carbon	.017	.002
Manganese	.53	.02
Phosphorus	.023	.001
Sulfur	.005	.002
Copper	.065	.003
Nickel	.082	.003
Chromium	.14	.01
Cobalt	.004	.002
Titanium	.036	.003
Cerium	.45	.03
Lanthanum	.26	.02
Calcium	.81	.03
Total Rare Earths	.86	.03

[1] The certified value listed for a constituent is the present best estimate of the "true" value based on the results of the cooperative program for certification.

[2] The estimated uncertainty listed for a constituent is based on judgment and represents an evaluation of the combined effects of method imprecision, possible systematic errors among methods, and material variability. No attempt was made to derive exact statistical measures of imprecision because several methods were involved in the determination of most constituents.

The overall coordination of the technical measurements leading to certification was performed under the direction of J.I. Shultz, ASTM/NIST Research Associate Program.

The technical and support aspects involved in the preparation, certification, and issuance of this Standard Referene Material were coordinated through the Standard Reference Materials Program by P.A. Lundberg.

August 20, 1990
Gaithersburg, MD 20899

William P. Reed, Acting Chief
Standard Reference Materials Program

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PLANNING, PREPARATION, TESTING, ANALYSIS:

The material for this SRM was provided by SKW Metals and Alloys, Inc, Niagara Falls, New York, courtesy of J.E. Cumbo.

Following sieving and blending operations at NIST, homogeneity testing was performed at NIST by E.S. Beary and P.J. Paulsen.

Cooperative analyses for certification were performed in the following laboratories:

- Andrew S. McCreath & Son, Inc., Harrisburg, PA, R.Eakin, L. Richards, M. Royer, S. Goldinger, J. Fickel and F.A. Pennington, Jr.

- Elkem Metals Co., Marietta, Ohio, H.H. Hall.

- Globe Metallurgical Inc., Beverly, Ohio, R.A. Pontello, C.R. Martin and J. C. Cline.

- SGS Commercial Testing and Engineering Co., Norfolk, VA, H.W. Trout.

- SKW Canada Inc., Becancour, Quebec, Canada, M. Lalancette and P. Mineau.

- SKW Alloys, Inc., Calvert City, KY, G.K. Palmer and J.E. Cumbo.

Elements other than those certified may be present in this material as indicated below. These are not certified, but are given as additional information on the composition.

Element	Percent, by Weight
Antimony	(0.02)
Barium	(0.03)
Boron	(0.003)
Molybdenum	(0.03)
Oxygen	(0.04)
Strontium	(0.01)
Zirconium	(0.007)