



Designation: B179-09 Designation: B179 - 10

Standard Specification for Aluminum Alloys in Ingot and Molten Forms for Castings from All Casting Processes¹

This standard is issued under the fixed designation B179; 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.

This standard has been approved for use by agencies of the Department of Defense.

1. Scope*

1.1 This specification covers commercial aluminum alloys in ingot form for remelting and molten form for the manufacture of castings. The specific gravity of these alloys does not exceed 3.0 and they are designated as shown in Table 1.

Note 1—Throughout this specification the use of “ingot” in a general sense includes sow, T-bar, T-ingot, and pig.

1.2 Alloy designations are in accordance with ANSI H35.1/H35.1(M). The equivalent Unified Numbering System alloy designations are in accordance with Practice E527.

Note 2—Supplementary data pertaining to the alloys covered by this specification when used in the form of castings are given in Specifications B26/B26M, B85/B85M, B108/B108M, B618/B618M, B686/B686M, and B955/B955M.

1.3 Unless the order specifies the “M” specification designation, the material shall be furnished to the inch-pound units.

1.4 For acceptance criteria for inclusion of new aluminum and aluminum alloys in this specification, see Annex A1.
~~†The values stated in inch-pound units are to be regarded as the 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.~~

1.5 The values stated in inch-pound units are to be regarded as standard. No other units of measurement are included in this standard.

1.5.1 *Exception*—Certain SI units appear in brackets in 7.1.2.

1.6 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety and health practices and determine the applicability of regulatory limitations prior to use.*

2. Referenced Documents

2.1 ASTM Standards:²

- B26/B26M Specification for Aluminum-Alloy Sand Castings
- B85/B85M Specification for Aluminum-Alloy Die Castings
- B108/B108M Specification for Aluminum-Alloy Permanent Mold Castings
- B618/B618M Specification for Aluminum-Alloy Investment Castings
- B666/B666M Practice for Identification Marking of Aluminum and Magnesium Products
- B686/B686M Specification for Aluminum Alloy Castings, High-Strength
- B955/B955M Specification for Aluminum-Alloy Centrifugal Castings
- E29 Practice for Using Significant Digits in Test Data to Determine Conformance with Specifications
- E34 Test Methods for Chemical Analysis of Aluminum and Aluminum-Base Alloys
- E527 Practice for Numbering Metals and Alloys in the Unified Numbering System (UNS)
- E607 Test Method for Atomic Emission Spectrometric Analysis Aluminum Alloys by the Point to Plane Technique Nitrogen Atmosphere
- E716 Practices for Sampling Aluminum and Aluminum Alloys for Spectrochemical Analysis

¹ This specification is under the jurisdiction of ASTM Committee B07 on Light Metals and Alloys and is the direct responsibility of Subcommittee B07.01 on Aluminum Alloy Ingots and Castings.

~~Current edition approved Nov. 15, 2009. Published December 2009. Originally approved in 1946. Last previous edition approved in 2006 as B179-06. DOI: 10.1520/B0179-09.~~

Current edition approved May 1, 2010. Published June 2010. Originally approved in 1946. Last previous edition approved in 2009 as B179-09. DOI: 10.1520/B0179-10.
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 Composition Limits of Aluminum Alloys in Ingot and Molten Forms for All Casting Processes^{A,B}

This Table has been reprinted by the permission of the Aluminum Association, Inc.

Only composition limits which are identical to those listed herein or are registered with the Aluminum Association should be designated as "AA" alloys.

NOTE 1—Where single units are shown, these indicate the maximum amounts permitted.

NOTE 2—Analysis shall be made for those elements for which limits are shown in this table.

NOTE 3—The following applies to all specified limits in the table: For purposes of acceptance or rejection an observed value or a calculated value obtained from analysis should be rounded to the nearest unit in the last right-hand place of figures used in expressing the specified limit in accordance with the rounding-off method of Practice E29.

Registered Alloys in the Form of XXX.1 Ingot and XXX.2 Ingot

Designation		Registered Date	Products ^C	Composition, %												Others ^D		Aluminum Minimum
AA No.	Former			Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Each	Total ^F			
100.1*	...	06/30/70	Ingot	0.15	0.6-0.8	0.10	... ^F	...	...^F	...	0.05	... ^F	...	0.03 ^F	0.10	99.00 ^G
130.1*	...	06/30/70	Ingot	... ^H	... ^H	0.10	... ^F	...	...^F	...	0.05	... ^F	...	0.03 ^F	0.10	99.30 ^G
150.1*	...	06/30/70	Ingot	... ^I	... ^I	0.05	... ^F	...	...^F	...	0.05	... ^F	...	0.03 ^F	0.10	99.50 ^G
160.1	...	01/28/76	Ingot	0.10 ^I	0.25 ^I	...	...^F	...	...^F	...	0.05	... ^F	...	0.03 ^F	0.10	99.60 ^G
170.1*	...	06/30/70	Ingot	... ^J	... ^J	...	...^F	...	...^F	...	0.05	... ^F	...	0.03 ^F	0.10	99.70 ^G
201.2	...	04/17/68	Ingot	0.10	0.10	4.0-5.2	0.20-0.50	0.20-0.55	...	...	...	0.15-0.35	...	0.05 ^K	0.10	Remainder
A201.1	A201.2	10/09/70	Ingot	0.05	0.07	4.0-5.0	0.20-0.40	0.20-0.35	...	...	...	0.15-0.35	...	0.03 ^K	0.10	Remainder
203.2	Hiduminium 350	12/02/72	Ingot	0.20	0.35	4.8-5.2	0.20-0.30	0.10	...	1.3-1.7	0.10	0.15-0.25	...	0.05 ^L	0.20	Remainder		
204.2	A-U5GT	10/01/74	Ingot	0.15	0.10-0.20	4.2-4.9	0.05	0.20-0.35	...	0.03	0.05	0.15-0.25	0.05	0.05	0.15	Remainder		
206.2	...	04/23/76	Ingot	0.10	0.10	4.2-5.0	0.20-0.50	0.20-0.35	...	0.03	0.05	0.15-0.25	0.05	0.05	0.15	Remainder		
A206.2	...	04/23/76	Ingot	0.05	0.07	4.2-5.0	0.20-0.50	0.20-0.35	...	0.03	0.05	0.15-0.25	0.05	0.05	0.15	Remainder		
B206.2	...	07/07/03	Ingot	0.05	0.07	4.2-5.0	0.20-0.50	0.20-0.35	...	0.03	0.05	0.05	0.05	0.05	0.15	Remainder		
240.1	A240.1, A140	...	Ingot	0.50	0.40	7.0-9.0	0.30-0.7	5.6-6.5	...	0.30-0.7	0.10	0.20	...	0.05	0.15	Remainder		
242.1	142	...	Ingot	0.7	0.8	3.5-4.5	0.35	1.3-1.8	0.25	1.7-2.3	0.35	0.25	...	0.05	0.15	Remainder		
242.2	142	...	Ingot	0.6	0.6	3.5-4.5	0.10	1.3-1.8	...	1.7-2.3	0.10	0.20	...	0.05	0.15	Remainder		
A242.1	A142	...	Ingot	0.6	0.6	3.7-4.5	0.10	1.3-1.7	0.15-0.25	1.8-2.3	0.10	0.07-0.20	...	0.05	0.15	Remainder		
A242.2	A142	...	Ingot	0.35	0.6	3.7-4.5	0.10	1.3-1.7	0.15-0.25	1.8-2.3	0.10	0.07-0.20	...	0.05	0.15	Remainder		
295.1	195	...	Ingot	0.7-1.5	0.8	4.0-5.0	0.35	0.03	...	...	0.35	0.25	...	0.05	0.15	Remainder
295.2	195	...	Ingot	0.7-1.2	0.8	4.0-5.0	0.30	0.03	...	...	0.30	0.20	...	0.05	0.15	Remainder
296.1	B295.1, B195	...	Ingot	2.0-3.0	0.9	4.0-5.0	0.35	0.05	...	0.35	0.50	0.25	...	0.05	0.15	Remainder		
296.2	B295.2, B195	...	Ingot	2.0-3.0	0.8	4.0-5.0	0.30	0.03	...	...	0.30	0.20	...	0.05	0.15	Remainder
301.1 ^M	...	08/02/94	Ingot ^N	9.5-10.5	0.8-1.2	3.0-3.5	0.50-0.8	0.30-0.50	...	1.0-1.5	0.05	0.20	...	0.03	0.10	Remainder		
302.1 ^M	...	08/02/94	Ingot ^N	9.5-10.5	0.20	2.8-3.2	...	0.8-1.2	...	1.0-1.5	0.05	0.20	...	0.03	0.10	Remainder		
303.1 ^M	...	08/02/94	Ingot ^N	9.5-10.5	0.8-1.2	0.20	0.50-0.8	0.50-0.7	...	...	0.05	0.20	...	0.03	0.10	Remainder
308.1 ^M	A108	...	Ingot	5.0-6.0	0.8	4.0-5.0	0.50	0.10	...	...	1.0	0.25	...	0.50	Remainder	

TABLE 1 Continued

Designation		Registered Date	Products ^C	Composition, %												Aluminum Minimum
AA No.	Former			Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Others ^D		
				Each	Total ^E											
308.2 ^M	A108	...	Ingot	5.0-6.0	0.8	4.0-5.0	0.30	0.10	...	...	0.50	0.20	...	...	0.50	Remainder
318.1 ^M	...	01/29/91	Ingot	5.5-6.5	0.8	3.0-4.0	0.50	0.15-0.6	...	0.35	0.9	0.25	...	...	0.50	Remainder
319.1 ^M	319, All Cast	...	Ingot	5.5-6.5	0.8	3.0-4.0	0.50	0.10	...	0.35	1.0	0.25	...	...	0.50	Remainder
319.2 ^M	319, All Cast	...	Ingot	5.5-6.5	0.6	3.0-4.0	0.10	0.10	...	0.10	0.10	0.20	...	...	0.20	Remainder
A319.1 ^M	...	08/28/70	Ingot	5.5-6.5	0.8	3.0-4.0	0.50	0.10	...	0.35	3.0	0.25	...	...	0.50	Remainder
B319.1 ^M	...	10/30/81	Ingot	5.5-6.5	0.9	3.0-4.0	0.8	0.15-0.50	...	0.50	1.0	0.25	...	...	0.50	Remainder
320.1 ^M	...	04/08/82	Ingot	5.0-8.0	0.9	2.0-4.0	0.8	0.10-0.6	...	0.35	3.0	0.25	...	...	0.50	Remainder
328.1 ^M	Red X-8	...	Ingot	7.5-8.5	0.8	1.0-2.0	0.20-0.6	0.25-0.6	0.35	0.25	1.5	0.25	...	...	0.50	Remainder
332.1 ^M	F332.1, F132	...	Ingot	8.5-10.5	0.9	2.0-4.0	0.50	0.6-1.5	...	0.50	1.0	0.25	...	...	0.50	Remainder
332.2 ^M	F332.2, F132	...	Ingot	8.5-10.0	0.6	2.0-4.0	0.10	0.9-1.3	...	0.10	0.10	0.20	...	...	0.30	Remainder
333.1 ^M	333	...	Ingot	8.0-10.0	0.8	3.0-4.0	0.50	0.10-0.50	...	0.50	1.0	0.25	...	...	0.50	Remainder
A333.1 ^M	...	08/28/70	Ingot	8.0-10.0	0.8	3.0-4.0	0.50	0.10-0.50	...	0.50	3.0	0.25	...	...	0.50	Remainder
336.1 ^M	A332.1, A132	...	Ingot	11.0-13.0	0.9	0.50-1.5	0.35	0.8-1.3	...	2.0-3.0	0.35	0.25	...	0.05	...	Remainder
336.2 ^M	A332.2, A132	...	Ingot	11.0-13.0	0.9	0.50-1.5	0.10	0.9-1.3	...	2.0-3.0	0.10	0.20	...	0.05	0.15	Remainder
339.1 ^M	Z332.1, Z132	...	Ingot	11.0-13.0	0.9	1.5-3.0	0.50	0.6-1.5	...	0.50-1.5	1.0	0.25	...	...	0.50	Remainder
354.1 ^M	354	...	Ingot	8.6-9.4	0.15	1.6-2.0	0.10	0.45-0.6	...	...	0.10	0.20	...	0.05	0.15	Remainder
354.2 ^M	354	07/21/97	Ingot	8.6-9.4	0.06	1.6-2.0	0.10	0.45-0.6	...	...	0.10	0.20	...	0.05	0.15	Remainder
355.1 ^M	355	...	Ingot	4.5-5.5	0.50 ^O	1.0-1.5	0.50 ^O	0.45-0.6	0.25	...	0.35	0.25	...	0.05	0.15	Remainder
355.2 ^M	355	...	Ingot	4.5-5.5	0.14-0.25	1.0-1.5	0.05	0.50-0.6	...	...	0.05	0.20	...	0.05	0.15	Remainder
A355.2 ^M	...	09/17/81	Ingot	4.5-5.5	0.06	1.0-1.5	0.03	0.50-0.6	...	...	0.03	0.04-0.20	...	0.03	0.10	Remainder
C355.1 ^M	...	06/04/74	Ingot	4.5-5.5	0.15	1.0-1.5	0.10	0.45-0.6	...	...	0.10	0.20	...	0.05	0.15	Remainder
C355.2 ^M	C355	...	Ingot	4.5-5.5	0.13	1.0-1.5	0.05	0.50-0.6	...	...	0.05	0.20	...	0.05	0.15	Remainder
356.1 ^M	356	...	Ingot	6.5-7.5	0.50 ^O	0.25	0.35 ^O	0.25-0.45	...	...	0.35	0.25	...	0.05	0.15	Remainder
356.2 ^M	356	...	Ingot	6.5-7.5	0.13-0.25	0.10	0.05	0.30-0.45	...	...	0.05	0.20	...	0.05	0.15	Remainder
A356.1 ^M	...	06/04/74	Ingot	6.5-7.5	0.15	0.20	0.10	0.30-0.45	...	...	0.10	0.20	...	0.05	0.15	Remainder
A356.2 ^M	A356	...	Ingot	6.5-7.5	0.12	0.10	0.05	0.30-0.45	...	...	0.05	0.20	...	0.05	0.15	Remainder
B356.2 ^M	...	09/17/81	Ingot	6.5-7.5	0.06	0.03	0.03	0.30-0.45	...	...	0.03	0.04-0.20	...	0.03	0.10	Remainder
C356.2 ^M	...	05/30/85	Ingot	6.5-7.5	0.04	0.03	0.03	0.30-0.45	...	...	0.03	0.04-0.20	...	0.03	0.10	Remainder
F356.2 ^M	...	10/20/71	Ingot	6.5-7.5	0.12	0.10	0.05	0.17-0.25	...	...	0.05	0.04-0.20	...	0.05	0.15	Remainder
357.1 ^M	357	...	Ingot	6.5-7.5	0.12	0.05	0.03	0.45-0.6	...	...	0.05	0.20	...	0.05	0.15	Remainder

3

TABLE 1 Continued

Designation		Registered Date	Products ^C	Composition, %												Aluminum Minimum
AA No.	Former			Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Others ^D		
				Each	Total ^E											
A357.2 ^M	A357	...	Ingot	6.5-7.5	0.12	0.10	0.05	0.45-0.7	...	...	0.05	0.04-0.20	...	0.03 ^P	0.10	Remainder
B357.2 ^M	...	09/17/81	Ingot	6.5-7.5	0.06	0.03	0.03	0.45-0.6	...	...	0.03	0.04-0.20	...	0.03	0.10	Remainder
C357.2 ^M	...	09/17/81	Ingot	6.5-7.5	0.06	0.03	0.03	0.50-0.7	...	...	0.03	0.04-0.20	...	0.03 ^P	0.10	Remainder
E357.1 ^M	...	06/06/01	Ingot	6.5-7.5	0.07	...	0.10	0.6-0.7	...	...	...	0.10-0.20	...	0.05 ^Q	0.15	Remainder
E357.2 ^M	...	06/06/01	Ingot	6.5-7.5	0.07	...	0.10	0.6-0.7	...	...	...	0.10-0.20	...	0.05 ^R	0.15	Remainder
F357.1 ^M	...	06/06/01	Ingot	6.5-7.5	0.07	0.20	0.10	0.45-0.7	...	...	0.10	0.04-0.20	...	0.05 ^Q	0.15	Remainder
F357.2 ^M	...	06/06/01	Ingot	6.5-7.5	0.07	0.20	0.10	0.45-0.7	...	...	0.10	0.04-0.20	...	0.05 ^R	0.15	Remainder
358.2 ^M	B358.2, Tens-50	...	Ingot	7.6-8.6	0.20	0.10	0.10	0.45-0.6	0.05	...	0.10	0.12-0.20	...	0.05 ^S	0.15	Remainder
359.2 ^M	359	...	Ingot	8.5-9.5	0.12	0.10	0.10	0.55-0.7	...	...	0.10	0.20	...	0.05	0.15	Remainder
A359.1 ^M	...	08/02/94	Ingot ^M	8.5-9.5	0.20	0.20	0.10	0.45-0.6	...	...	0.05	0.20	...	0.03	0.10	Remainder
360.2 ^M	360	...	Ingot	9.0-10.0	0.7-1.1	0.10	0.10	0.45-0.6	...	0.10	0.10	...	0.10	...	0.20	Remainder
A360.1 ^{T,M}	A360	...	Ingot	9.0-10.0	1.0	0.6	0.35	0.45-0.6	...	0.50	0.40	...	0.15	...	0.25	Remainder
A360.2 ^M	A360	...	Ingot	9.0-10.0	0.6	0.10	0.05	0.45-0.6	...	...	0.05	...	...	0.05	0.15	Remainder
361.1 ^M	...	06/30/78	Ingot	9.5-10.5	0.8	0.50	0.25	0.45-0.6	0.20-0.30	0.20-0.30	0.40	0.20	0.10	0.05	0.15	Remainder
363.1 ^M	363	01/16/70	Ingot	4.5-6.0	0.8	2.5-3.5	... ^U	0.20-0.40	... ^U	0.25	3.0-4.5	0.20	0.25	... ^V	0.30	Remainder
364.2 ^M	364	...	Ingot	7.5-9.5	0.7-1.1	0.20	0.10	0.25-0.40	0.25-0.50	0.15	0.15	...	0.15	0.05 ^W	0.15	Remainder
365.1 ^M	Silafont-36	01/05/96	Ingot	9.5-11.5	0.12	0.03	0.50-0.8	0.15-0.50	...	...	0.07	0.04-0.15	...	0.03 ^X	0.10	Remainder
A365.1 ^M	Aural 2	10/17/08	Ingot	9.5-11.5	0.15-0.20	0.02	0.30-0.6	0.15-0.6	...	...	0.03	0.10	...	0.05 ^Y	0.15	Remainder
366.1 ^M	...	03/27/03	Ingot ^Y	6.5-7.5	0.12	0.05	0.03	0.6-1.2	...	...	0.05	0.20	...	0.05	0.15	Remainder
366.1 ^M	...	03/27/03	Ingot ^Z	6.5-7.5	0.12	0.05	0.03	0.6-1.2	...	...	0.05	0.20	...	0.05	0.15	Remainder
367.1 ^M	Mercalloy367	10/01/07	Ingot	8.5-9.5	0.20	0.25	0.25-0.35	0.35-0.50	...	...	0.10	0.20	... ^Z	0.05	0.15	Remainder
367.1 ^M	Mercalloy367	10/01/07	Ingot	8.5-9.5	0.20	0.25	0.25-0.35	0.35-0.50	...	...	0.10	0.20	... ^{AA}	0.05	0.15	Remainder
368.1 ^M	Mercalloy366	10/01/07	Ingot	8.5-9.5	0.20	0.25	0.25-0.35	0.15-0.30	...	...	0.10	0.20	... ^Z	0.05	0.15	Remainder
368.1 ^M	Mercalloy366	10/01/07	Ingot	8.5-9.5	0.20	0.25	0.25-0.35	0.15-0.30	...	...	0.10	0.20	... ^{AA}	0.05	0.15	Remainder
369.1 ^M	Special K-9	04/04/78	Ingot	11.0-12.0	1.0	0.50	0.35	0.30-0.45	0.30-0.40	0.05	0.9	...	0.10	0.05	0.15	Remainder
380.2 ^M	380	...	Ingot	7.5-9.5	0.7-1.1	3.0-4.0	0.10	0.10	...	0.10	0.10	...	0.10	...	0.20	Remainder
A380.1 ^{T,M}	A380	...	Ingot	7.5-9.5	1.0	3.0-4.0	0.50	0.10	...	0.50	2.9	...	0.35	...	0.50	Remainder
A380.2 ^M	A380	...	Ingot	7.5-9.5	0.6	3.0-4.0	0.10	0.10	...	0.10	0.10	...	...	0.05	0.15	Remainder
B380.1 ^M	A380	...	Ingot	7.5-9.5	1.0	3.0-4.0	0.50	0.10	...	0.50	0.9	...	0.35	...	0.50	Remainder

4

TABLE 1 Continued

Designation		Registered Date	Products ^C	Composition, %												Aluminum Minimum
AA No.	Former			Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Others ^D		
				Each	Total ^E											
C380.1 ^M	...	01/29/91	Ingot	7.5-9.5	1.0	3.0-4.0	0.50	0.15-0.30	...	0.50	2.9	...	0.35	...	0.50	Remainder
D380.1 ^M	...	01/29/91	Ingot	7.5-9.5	1.0	3.0-4.0	0.50	0.15-0.30	...	0.50	0.90	...	0.35	...	0.50	Remainder
E380.1 ^M	...	10/12/06	Ingot	7.5-9.5	1.0	3.0-4.0	0.50	0.30	...	0.50	2.9	...	0.35	...	0.50	Remainder
381.2 ^M	...	06/12/97	Ingot	9.0-10.0	0.7-1.0	3.0-4.0	0.50	0.13	0.15	0.50	2.9	0.20	0.15	...	0.50	Remainder
381.2 ^M	...	06/12/97	Ingot	9.0-10.0	0.7-1.0	3.0-4.0	0.50	0.13	0.15	0.50	2.9	0.20	0.15	...	0.50	Remainder
383.1 ^M	...	...	Ingot	9.5-11.5	1.0	2.0-3.0	0.50	0.10	...	0.30	2.9	...	0.15	...	0.50	Remainder
383.2 ^M	...	...	Ingot	9.5-11.5	0.6-1.0	2.0-3.0	0.10	0.10	...	0.10	0.10	...	0.10	...	0.20	Remainder
A383.1 ^M	...	01/29/91	Ingot	9.5-11.5	1.0	2.0-3.0	0.50	0.15-0.30	...	0.30	2.9	...	0.15	...	0.50	Remainder
B383.1 ^M	...	10/12/06	Ingot	9.5-11.5	1.0	2.0-3.0	0.50	0.30	...	0.30	2.9	...	0.15	...	0.50	Remainder
384.1 ^M	384	...	Ingot	10.5-12.0	1.0	3.0-4.5	0.50	0.10	...	0.50	2.9	...	0.35	...	0.50	Remainder
384.2 ^M	384	...	Ingot	10.5-12.0	0.6-1.0	3.0-4.5	0.10	0.10	...	0.10	0.10	...	0.10	...	0.20	Remainder
A384.1 ^M	384	...	Ingot	10.5-12.0	1.0	3.0-4.5	0.50	0.10	...	0.50	0.9	...	0.35	...	0.50	Remainder
B384.1 ^M	...	01/29/91	Ingot	10.5-12.0	1.0	3.0-4.5	0.50	0.15-0.30	...	0.50	0.9	...	0.35	...	0.50	Remainder
C384.1 ^M	...	01/29/91	Ingot	10.5-12.0	1.0	3.0-4.5	0.50	0.15-0.30	...	0.50	2.9	...	0.35	...	0.50	Remainder
390.2 ^M	390	...	Ingot	16.0-18.0	0.6-1.0	4.0-5.0	0.10	0.50-0.65 ^{AB}	...	...	0.10	0.20	...	0.10	0.20	Remainder
390.2 ^M	390	...	Ingot	16.0-18.0	0.6-1.0	4.0-5.0	0.10	0.50-0.65 ^{AC}	...	...	0.10	0.20	...	0.10	0.20	Remainder
A390.1 ^M	A390	...	Ingot	16.0-18.0	0.40	4.0-5.0	0.10	0.50-0.65 ^{AB}	...	...	0.10	0.20	...	0.10	0.20	Remainder
A390.1 ^M	A390	...	Ingot	16.0-18.0	0.40	4.0-5.0	0.10	0.50-0.65 ^{AC}	...	...	0.10	0.20	...	0.10	0.20	Remainder
B390.1 ^M	...	03/29/79	Ingot	16.0-18.0	1.0	4.0-5.0	0.50	0.50-0.65 ^{AB}	...	0.10	1.4	0.20	...	0.10	0.20	Remainder
B390.1 ^M	...	03/29/79	Ingot	16.0-18.0	1.0	4.0-5.0	0.50	0.50-0.65 ^{AC}	...	0.10	1.4	0.20	...	0.10	0.20	Remainder
391.1 ^M	Mercosil	01303/01	Ingot	18.0-20.0	0.9	0.20	0.30	0.45-0.70	...	...	0.10	0.20	...	0.10	0.20	Remainder
A391.1 ^M	Mercosil	01/30/01	Ingot	18.0-20.0	0.50 ^O	0.20	0.30 ^O	0.45-0.70	...	...	0.10	0.20	...	0.10	0.20	Remainder
B391.1 ^M	Mercosil	01/30/01	Ingot	18.0-20.0	0.15	0.20	0.30	0.45-0.70	...	...	0.10	0.20	...	0.10	0.20	Remainder

TABLE 1 Continued

Designation		Registered Date	Products ^C	Composition, %												Aluminum Minimum
AA No.	Former			Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Others ^D		
				Each	Total ^F											
392.1 ^M	392	...	Ingot	18.0-20.0	1.1	0.40-0.8	0.20-0.6	0.9-1.2	...	0.50	0.40	0.20	0.30	0.15	0.50	Remainder
393.1 ^M	Vanasil	...	Ingot	21.0-23.0	1.0	0.7-1.1	0.10	0.8-1.3	...	2.0-2.5	0.10	0.10-0.20	...	0.05 ^{AC}	0.15	Remainder
393.1 ^M	Vanasil	...	Ingot	21.0-23.0	1.0	0.7-1.1	0.10	0.8-1.3	...	2.0-2.5	0.10	0.10-0.20	...	0.05 ^{AD}	0.15	Remainder
393.2 ^M	Vanasil	...	Ingot	21.0-23.0	0.8	0.7-1.1	0.10	0.8-1.3	...	2.0-2.5	0.10	0.10-0.20	...	0.05 ^{AC}	0.15	Remainder
393.2 ^M	Vanasil	...	Ingot	21.0-23.0	0.8	0.7-1.1	0.10	0.8-1.3	...	2.0-2.5	0.10	0.10-0.20	...	0.05 ^{AD}	0.15	Remainder
413.2 ^M	13	...	Ingot	11.0-13.0	0.7-1.1	0.10	0.10	0.07	...	0.10	0.10	...	0.10	...	0.20	Remainder
A413.1 ^{T,M}	A13	...	Ingot	11.0-13.0	1.0	1.0	0.35	0.10	...	0.50	0.40	...	0.15	...	0.25	Remainder
A413.2 ^M	A13	...	Ingot	11.0-13.0	0.6	0.10	0.05	0.05	...	0.05	0.05	...	0.05	...	0.10	Remainder
B413.1 ^M	...	11/06/84	Ingot	11.0-13.0	0.40	0.10	0.35	0.05	...	0.05	0.10	0.25	...	0.05	0.20	Remainder
443.1 ^M	43	...	Ingot	4.5-6.0	0.6	0.6	0.50	0.05	0.25	...	0.50	0.25	...	...	0.35	Remainder
443.2 ^M	43	...	Ingot	4.5-6.0	0.6	0.10	0.10	0.05	...	...	0.10	0.20	...	0.05	0.15	Remainder
A443.1 ^M	43 (0.30 max Cu)	...	Ingot	4.5-6.0	0.6	0.30	0.50	0.05	0.25	...	0.50	0.25	...	...	0.35	Remainder
B443.1 ^M	43 (0.15 max Cu)	...	Ingot	4.5-6.0	0.6	0.15	0.35	0.05	...	...	0.35	0.25	...	0.05	0.15	Remainder
C443.1 ^M	A43	...	Ingot	4.5-6.0	1.1	0.6	0.35	0.10	...	0.50	0.40	...	0.15	...	0.25	Remainder
C443.2 ^M	A43	...	Ingot	4.5-6.0	0.7-1.1	0.10	0.10	0.05	...	...	0.10	...	...	0.05	0.15	Remainder
444.2 ^M	...	09/24/73	Ingot	6.5-7.5	0.13-0.25	0.10	0.05	0.05	...	...	0.05	0.20	...	0.05	0.15	Remainder
A444.1 ^M	...	06/04/74	Ingot	6.5-7.5	0.15	0.10	0.10	0.05	...	...	0.10	0.20	...	0.05	0.15	Remainder
A444.2 ^M	A344	...	Ingot	6.5-7.5	0.12	0.05	0.05	0.05	...	...	0.05	0.20	...	0.05	0.15	Remainder
505.1	...	04/12/004	Ingot ^{AD}	0.40-0.8	0.50	0.15-0.40	0.15	0.9-1.2	0.04-0.35	...	0.25	0.15	...	0.05	0.15	Remainder
505.1	...	04/12/004	Ingot ^{AE}	0.40-0.8	0.50	0.15-0.40	0.15	0.9-1.2	0.04-0.35	...	0.25	0.15	...	0.05	0.15	Remainder
511.1	F514.1, F214	...	Ingot	0.30-0.7	0.40	0.15	0.35	3.6-4.5	...	...	0.15	0.25	...	0.05	0.15	Remainder
511.2	F514.2, F214	...	Ingot	0.30-0.7	0.30	0.10	0.10	3.6-4.5	...	...	0.10	0.20	...	0.05	0.15	Remainder
512.2	B514.2, B214	...	Ingot	1.4-2.2	0.30	0.10	0.10	3.6-4.5	...	...	0.10	0.20	...	0.05	0.15	Remainder
513.2	A514.2, A214	...	Ingot	0.30	0.30	0.10	0.10	3.6-4.5	...	...	1.4-2.2	0.20	...	0.05	0.15	Remainder