



Designation: B179 – 11^{ε1}

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.

^{ε1} NOTE—Table 1 was corrected editorially in August 2013.

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](#).

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](#)

[B969 Specification for Aluminum-Alloy Castings Produced by the Squeeze Casting, Thixocast and Rheocast Semi-Solid Casting Processes](#)

[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 \(Withdrawn 2011\)³](#)

[E716 Practices for Sampling and Sample Preparation of Aluminum and Aluminum Alloys for Determination of Chemical Composition by Spectrochemical Analysis](#)

[E1251 Test Method for Analysis of Aluminum and Aluminum Alloys by Spark Atomic Emission Spectrometry](#)

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.

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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.

³ The last approved version of this historical standard is referenced on www.astm.org.

*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

AA No.	Designation	Registered Date	Products ^C	Composition, %													Aluminum Minimum	
				Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Others ^D Each	Others ^D Total ^E			
100.1*	...	06/30/70	Ingot	0.15	0.6-0.8	0.10	... ^F	...	...^F	0.05	...	...	...	...	...	0.03 ^F	0.10	99.00 ^G
130.1*	...	06/30/70	Ingot	... ^H	... ^H	0.10	... ^F	...	...^F	0.05	...	...	...	...	...	0.03 ^F	0.10	99.30 ^G
150.1*	...	06/30/70	Ingot	... ^I	... ^I	0.05	... ^F	...	...^F	0.05	...	...	...	...	...	0.03 ^F	0.10	99.50 ^G
160.1	...	01/28/76	Ingot	0.10 ^I	0.25 ^I	...	...^F	...	...^F	0.05	...	...	...	...	...	0.03 ^F	0.10	99.60 ^G
170.1*	...	06/30/70	Ingot	... ^J	... ^J	...	...^F	...	...^F	0.05	...	...	...	...	...	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	Aluminum 350	12/02/72	Ingot	0.20	0.35	4.8-5.2	0.20-0.30	0.10	...	1.3-1.7	0.03	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	0.03	0.05	0.15-0.25	...	...	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	0.03	0.05	0.15-0.25	...	...	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	0.03	0.05	0.15-0.25	...	...	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	0.03	0.05	0.15-0.25	...	...	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	0.03	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	0.35	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	0.10	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	0.10	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	0.10	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	0.35	0.50	0.25	...	...	...	0.35	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	0.05	0.20	...	...	0.03	0.10	Remainder

TABLE 1 Continued

Designation		Registered Date	Products ^C	Composition, %											Others ^D		Aluminum Minimum
				Si	Fe	Cu	Mn	Mg	Cr	Ni	Zn	Ti	Sn	Each	Total ^E		
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
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

TABLE 1 Continued

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 ^E	
B356.2 ^M	...	09/17/81	Ingot	6.5-7.5	0.06	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	0.30-0.45	...	...	0.03	0.04-0.20	...	0.03	0.10	Remainder
F356.2 ^M	...	10/20/71	Ingot	6.5-7.5	0.12	0.05	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	0.03	0.45-0.6	...	...	0.03	0.20	...	0.05	0.15	Remainder
A357.2 ^M	A357	...	Ingot	6.5-7.5	0.12	0.05	0.45-0.7	...	...	0.03	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	0.45-0.6	...	...	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	0.50-0.7	...	...	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	...	0.6-0.7	...	...	0.10	0.10-0.20	...	0.05 ^Q	0.15	Remainder
E357.2 ^M	...	06/06/01	Ingot	6.5-7.5	0.07	...	0.6-0.7	...	...	0.10	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	0.45-0.7	...	...	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	0.45-0.7	...	...	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	0.45-0.6	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	0.55-0.7	...	...	0.10	0.20	...	0.05	0.15	Remainder
A359.1 ^M	...	08/02/94	Ingot ^N	8.5-9.5	0.20	0.10	0.45-0.6	...	...	0.10	0.20	...	0.03	0.10	Remainder
360.2 ^M	360	...	Ingot	9.0-10.0	0.7-1.1	0.10	0.45-0.6	...	...	0.10	...	0.10	...	0.20	Remainder
A360.1 ^{T,M}	A360	...	Ingot	9.0-10.0	1.0	0.35	0.45-0.6	...	...	0.50	...	0.15	...	0.25	Remainder
A360.2 ^M	A360	...	Ingot	9.0-10.0	0.6	0.05	0.45-0.6	...	...	...	...	...	0.05	0.15	Remainder
361.1 ^M	...	06/30/78	Ingot	9.5-10.5	0.8	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	...	0.20-0.40	...	...	...	0.25	0.25	...	0.30	Remainder
364.2 ^M	364	...	Ingot	7.5-9.5	0.7-1.1	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	0.15-0.50	...	...	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	0.15-0.6	...	...	0.03	0.10	...	0.05 ^Y	0.15	Remainder
366.1 ^M	...	03/27/03	Ingot ^Z	6.5-7.5	0.12	0.05	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	0.35-0.50	...	...	0.10	0.20	...	0.05	0.15	Remainder
368.1 ^M	Mercalloy366	10/01/07	Ingot	8.5-9.5	0.20	0.25	0.15-0.30	...	...	0.10	0.20	...	0.05	0.15	Remainder
369.1 ^M	Special K-9	04/04/78	Ingot	11.0-12.0	1.0	0.50	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	0.10	0.10	...	0.10	0.10	...	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	Others ^D Total ^E	
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
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	0.15	0.50	2.9	...	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 ^{AC}	...	...	...	0.10	0.10	...	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	0.10	...	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	...	0.20	0.20	Remainder
391.1 ^M	Mercosil	01/30/01	Ingot	18.0-20.0	0.9	0.20	0.30	0.45-0.70	...	...	...	0.10	0.10	...	0.10	0.20	Remainder
A391.1 ^M	Mercosil	01/30/01	Ingot	18.0-20.0	0.50 ^D	0.20	0.30 ^D	0.45-0.70	...	...	...	0.10	0.10	...	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	0.10	...	0.10	0.20	Remainder
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 ^{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 ^{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

TABLE 1 Continued

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 ^E	
A413.1 TM	A13	...	Ingot	11.0-13.0	1.0	1.0	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	...	0.10	Remainder	
B413.1 ^M	...	11/06/84	Ingot	11.0-13.0	0.40	0.10	0.05	...	0.05	0.10	...	...	0.05	0.20	Remainder
443.1 ^M	43	...	Ingot	4.5-6.0	0.6	0.6	0.05	...	...	0.50	...	...	...	0.35	Remainder
443.2 ^M	43	...	Ingot	4.5-6.0	0.6	0.10	0.05	0.25	...	0.10	...	...	0.05	0.15	Remainder
A443.1 ^M	43 (0.30 max Cu)	...	Ingot	4.5-6.0	0.6	0.30	0.05	0.25	...	0.50	...	...	...	0.35	Remainder
B443.1 ^M	43 (0.15 max Cu)	...	Ingot	4.5-6.0	0.6	0.15	0.05	...	...	0.35	...	...	0.05	0.15	Remainder
C443.1 ^M	A43	...	Ingot	4.5-6.0	1.1	0.6	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	0.05	...	...	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	0.15	Remainder
A444.1 ^M	...	06/04/74	Ingot	6.5-7.5	0.15	0.10	0.05	...	...	0.10	...	...	0.05	0.15	Remainder
A444.2 ^M	A344	...	Ingot	6.5-7.5	0.12	0.05	0.05	...	...	0.05	...	...	0.05	0.15	Remainder
505.1	...	04/12/004	Ingot ^{A/E}	0.40-0.8	0.50	0.15-0.40	0.15	0.04-0.35	...	0.25	...	...	0.05	0.15	Remainder
511.1	F514.1, F214	...	Ingot	0.30-0.7	0.40	0.15	0.35	...	...	0.15	...	...	0.05	0.15	Remainder
511.2	F514.2, F214	...	Ingot	0.30-0.7	0.30	0.10	0.10	...	...	0.10	...	...	0.05	0.15	Remainder
512.2	B514.2, B214	...	Ingot	1.4-2.2	0.30	0.10	0.10	...	...	0.10	...	...	0.05	0.15	Remainder
513.2	A514.2, A214	...	Ingot	0.30	0.30	0.10	0.10	...	...	1.4-2.2	...	...	0.05	0.15	Remainder
514.1	214	...	Ingot	0.35	0.40	0.15	0.35	...	...	0.15	...	...	0.05	0.15	Remainder
514.2	214	...	Ingot	0.30	0.30	0.10	0.10	...	...	0.10	...	...	0.05	0.15	Remainder
515.2	L514.2, L214	01/02/70	Ingot	0.50-1.0	0.6-1.0	0.10	0.40-0.6	...	...	0.05	...	...	0.05	0.15	Remainder
516.1	...	09/30/83	Ingot	0.30-1.5	0.35-0.7	0.30	0.15-0.40	...	0.25-0.40	0.20	0.10-0.20	0.10	0.05 ^{A/F}	...	Remainder	
518.1	218	...	Ingot	0.35	1.1	0.25	0.35	...	0.15	0.15	...	0.15	...	0.25	Remainder	
518.2	218	...	Ingot	0.25	0.7	0.10	0.10	...	0.05	...	...	0.05	...	0.10	Remainder
520.2	220	...	Ingot	0.15	0.20	0.20	0.10	...	...	0.10	...	...	0.05	0.15	Remainder
535.2	Almag 35	...	Ingot	0.10	0.10	0.05	0.10-0.25	...	...	...	0.10-0.25	...	0.05 ^{A/G}	0.15	Remainder
A535.1	A218	...	Ingot	0.20	0.15	0.10	0.10-0.25	...	...	...	0.25	...	0.05	0.15	Remainder
B535.2	B218	...	Ingot	0.10	0.12	0.05	0.05	...	...	...	0.10-0.25	...	0.05	0.15	Remainder
705.1	603, Temalloy 5	...	Ingot	0.20	0.6	0.20	0.40-0.6	0.20-0.40	...	2.7-3.3	0.25	...	0.05	0.15	Remainder	