REGISTRATION RECORD SERIES
PINK SHEETS

Designations and Chemical Composition Limits for Aluminum Alloys in the Form of Castings and Ingot

The Aluminum Association

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F O R E W O R D

Listed herein are designations and chemical composition limits for aluminum alloys in the form of castings or ingot registered with The Aluminum Association. This list is maintained by the Technical Committee on Product Standards of The Aluminum Association. The numerical designations of these compositions were assigned in conformance with the system adopted by The Aluminum Association in 1954 and approved by the American Standards Association (now American National Standards Institute Incorporated) as an American Standard in 1957 (see American National Standard Alloy and Temper Designation Systems for Aluminum ANSI H35.1). Additions may be made as required, and alloys will be deleted when no longer in commercial use. In considering requests for additions, the following criteria apply:

1. The aluminum or aluminum alloy shall be offered for sale currently and shall have been sold within the 12 months immediately preceding the date of the registration request, in both cases in commercial quantities [a-d]. Such sales shall have been made to external users/customers (i.e., internal use and/or transfer of an alloy within a company does not meet the stated criteria).

   a. The alloy has undergone bona fide mill production and is NOT a "laboratory" scale volume.
   b. The alloy is cast and fabricated in standard production facilities and is NOT a one-time production.
   c. There is an expected and ongoing commercial demand and/or need for the alloy.
   d. The alloy shall be purchased and sold in a standard business context, which indicates that the alloy is actually "sold" and not "given away" for uses such as promotional evaluations.

2. The complete chemical composition limits shall be disclosed and judged to be reasonable and technically correct by the Technical Committee on Product Standards.

3. The composition shall be significantly different from that of any aluminum or aluminum alloy for which a numerical designation for castings and ingot has already been assigned.

4. Any request for the registration of Ingot composition limits shall be accompanied with a request for registration of casting composition limits of the same designation, with the exception of rotor and aluminizing ingot for which only ingot composition limits are required.

5. Ingot designated xxx.1 has chemical composition limits identical to those assigned to the casting (xxx.0) except grain refining elements and except for the following provisions:

Maximum Iron Percentage:

For All Forms of Castings	For Ingot, Fe Shall be At Least
Up thru 0.15	0.03 less than castings
Over 0.15 thru 0.25	0.05 less than castings
Over 0.25 thru 0.6	0.10 less than castings
Over 0.6 thru 1.0	0.2 less than castings
Over 1.0	0.3 less than castings

Minimum Magnesium Percentage[e]:

For All Forms of Castings	For Ingot
Less than 0.50	0.05 more than castings
0.50 and greater	0.1 more than castings

Maximum Zinc Percentage:

For Die Castings	For Ingot
Over 0.25 thru 0.6	0.10 less than castings
Over 0.6	0.1 less than castings

e. Applicable only if magnesium is an alloying element (i.e. has a registered minimum and maximum percentage).

6. Ingot designated xxx.2 has chemical composition limits which differ from, but fall within, those prescribed for xxx.1 ingot.

7. The product (Sand, Permanent Mold, Die, Investment Casting, or any variation of these processes) shall be shown at the time of registration. Other products may pertain even when not listed.

8. Composition limits changes:

   8.1 No changes in composition limits are allowed after the registration is final.

   8.2 Composition limit change proposals for experimental ("X") aluminum or aluminum alloys, including the net of changes made sequentially, shall be restricted to the extent allowed by the alloy modification rules of ANSI H35.1. No changes shall be permitted if they affect the validity of any registered alloy or alloy modification. If the composition limit changes are beyond those for a modification, then the changed composition will be given a new experimental designation. The former experimental alloy can continue as such or be deactivated at the discretion of the registrant. Composition limit changes are subject to review for 30 days by the Technical Committee on Product Standards of The Aluminum Association. However, the registrant has the final authority to change the composition, as desired, provided the change complies with the above rules. Changes proposed by those other than the registrant are acceptable only with the written approval of the registrant.

   8.3 A composition shall not be designated as experimental (with prefix "X") for more than five years. During the period that an alloy is designated as experimental, the registrant shall confirm to the Technical Committee on Product Standards at intervals not exceeding two years the reason(s) experimental designation is still required.

Some of the registered alloys may be the subject of patent or patent applications, and their listing herein is not to be construed in any way as the granting of a license under such patent rights.