



Designation: B296 – 20

Standard Practice for Temper Designations of Magnesium Alloys, Cast and Wrought¹

This standard is issued under the fixed designation B296; 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 reappraisal. A superscript epsilon (ϵ) indicates an editorial change since the last revision or reappraisal.

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

1. Scope

1.1 This practice covers a system for designating the tempers of magnesium alloys, cast and wrought. The designations used in ASTM specifications under the jurisdiction of Committee B07 for magnesium alloy castings and wrought products conform to this practice.²

1.2 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

2. Basis of Codification

2.1 The designations for temper are used for all forms of magnesium and magnesium-alloy products except ingots and are based on the sequence of basic treatments used to produce the various tempers.

2.2 The temper designation follows the alloy designation, the two being separated by a dash.

¹ This practice is under the jurisdiction of the ASTM Committee B07 on Light Metals and Alloys and is the direct responsibility of Subcommittee B07.04 on Magnesium Alloy Cast and Wrought Products.

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² The designations used in ASTM Committee B07 specifications for aluminum-alloy wrought and cast products conform to the American National Standard H35.1/H35.1M.

2.3 Basic temper designations consist of letters. Subdivisions of the basic tempers, where required, are indicated by a digit or digits following the letter. These designate specific sequences of basic treatments, but only operations recognized as significantly influencing the characteristics of the product are indicated. Should some other variation of the same sequence of basic operations be applied to the same alloy, resulting in different characteristics, then additional digits are added to the designation.

NOTE 1—In material specifications containing reference to two or more tempers of the same alloy which result in identical mechanical properties, the distinction between the tempers should be covered in suitable explanatory notes.

2.4 The temper designations and the subdivisions are fully defined and explained in [Table 1](#). A brief outline for quick reference is given in [Table 2](#).

3. Referenced Documents

3.1 *ANSI Standard:*³

[ANSI H35.1/H35.1M American National Standard Alloy and Temper Designation Systems for Aluminum](#)

4. Keywords

4.1 cast and wrought alloys; magnesium alloys; temper designations

³ Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.