



AEROSPACE MATERIAL SPECIFICATION

AMS4890™**REV. D**

Issued	1956-02
Revised	2005-09
Reaffirmed	2012-05
Stabilized	2018-01

Superseding AMS4890C

Copper-Beryllium Alloy Castings
97Cu - 2.1Be - 0.52Co - 0.28Si
Solution Heat Treated (TB00)
(Composition similar to UNS C82500)

RATIONALE

AMS4890D stabilizes this document because it is no longer state of the art and other documents contain similar but not necessarily equivalent requirements.

STABILIZED NOTICE

AMS4890D has been declared "STABILIZED" by SAE AMS Committee D Nonferrous Alloys. This document was stabilized because this document contains mature technology that is not expected to change and thus no further revisions are anticipated. Previously this document was reaffirmed. The last technical update of this document occurred in September, 2005. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to this specification; including exceptions listed on the certification.

NOTE: In many cases, the purchaser may represent a sub tier supplier and not the cognizant engineering organization.

AMS Committee D recommends that the following similar but not identical specifications be used for the "STABILIZED" specification.

ASTM B 770, alloy C82500

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Documents
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1. SCOPE:

1.1 Form:

This specification covers a copper-beryllium alloy in the form of sand, investment, or centrifugal castings.

- 1.1.1 Castings shall be made by the investment casting process unless another casting process is agreed upon by purchaser.

1.2 Application:

These castings have been used typically for small parts of intricate design requiring good corrosion-resistance and high strength, but usage is not limited to such applications.

1.3 Safety - Hazardous Materials:

While the materials, methods, applications, and processes described or referenced in this specification may involve the use of hazardous materials, this specification does not address the hazards which may be involved in such use. It is the sole responsibility of the user to ensure familiarity with the safe and proper use of any hazardous materials and to take necessary precautionary measures to ensure the health and safety of all personnel involved.

2. APPLICABLE DOCUMENTS:

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001 or www.sae.org.

AMS 2360	Room Temperature Tensile Properties of Castings
AMS 2804	Identification, Castings
AMS 7250	Pyrometry

2.2 ASTM Publications:

Available from ASTM, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959 or www.astm.org.

ASTM E 8	Tension Testing of Metallic Materials
ASTM E 8M	Tension Testing of Metallic Materials (Metric)
ASTM E 18	Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials
ASTM B 194	(Annex) Chemical Analysis of Copper-Beryllium Alloys
ASTM B 208	Preparing Tension Test Specimens for Copper-Base Alloys for Sand Castings
ASTM E 272	Reference Radiographs for High-Strength Copper-Base and Nickel-Copper Alloy Castings
ASTM E 478	Chemical Analysis of Copper Alloys
ASTM B 770	Copper-Beryllium Alloy Sand Castings for General Application
ASTM E 1417	Liquid Penetrant Examination
ASTM E 1742	Radiographic Examination

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the percentages by weight shown in Table 1, determined by wet chemical methods in accordance with ASTM E 106 or ASTM E 478, by spectro-chemical methods, or by other analytical methods acceptable to purchaser.