



AEROSPACE STANDARD

AS81021™**REV. C**

Issued	2002-02
Revised	2016-05
Reaffirmed	2022-06
Stabilized	2026-07

Superseding AS81021B

Copper-Beryllium Alloy
(Copper Alloy Numbers C17500 and C17510), Strip

RATIONALE

AS81021C has been declared "STABILIZED" by SAE AMS Committee D Nonferrous Alloys. This document will no longer be updated and may no longer represent standard industry practice. This document contains mature technology that is not expected to change and thus no further revisions are anticipated. The committee can find no producers or users for this material.

NOTE: Previously, this document was reaffirmed. The last technical update of this document occurred in May 2016. Users of this document should refer to the cognizant engineering organization for disposition of any issues with reports/certifications to the specification, including exceptions listed on the certification. In many cases, the purchaser may represent a sub-tier supplier and not the cognizant engineering organization.

STABILIZED NOTICE

AS81021C has been declared "stabilized" by the SAE AMS Committee D Nonferrous Alloys and will no longer be subjected to periodic reviews for currency. Users are responsible for verifying references and continued suitability of technical requirements. Newer technology may exist.

SAE Executive Standards Committee Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2026 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, or used for text and data mining, AI training, or similar technologies, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 1-877-606-7323 (U.S. and Canada only)
Tel: 1-724-776-4970 (outside U.S. and Canada)
Fax: 724-776-0790
Email: CustomerService@sae.org
<http://www.sae.org>

SAE WEB ADDRESS:

Full document details: SAE AS81021C

For more information on this standard, visit
<https://www.sae.org/standards/content/AS81021C/>

**Documents**

Document Sharing Hub

NOTICE

The initial SAE publication of this document was taken directly from U.S. Military Standard MIL-C-81021A, Notice 1. This SAE Standard may retain the same part numbers established by the original military document.

Any requirements associated with Qualified Products Lists (QPLs) may continue to be mandatory for DoD contracts. Requirements relating to QPLs have not been adopted by the SAE for this standard and are not part of this SAE document.

1. SCOPE

1.1 Scope

This specification covers the requirements for the acquisition of two alloys of copper-beryllium alloy strip, having higher electrical conductivity than copper-beryllium alloy strip normally used (see 6.1). All sizes of strip are covered by this specification.

1.2 Tempers

Copper alloy numbers C17500 and C17510 strip shall be furnished flat or coiled in the following tempers, as specified in 6.2:

A - Cold rolled and solution heat treated (also designated TB00).

1/2H - Hot or cold rolled, solution heat treated, and cold rolled half-hard (also designated TD02).

H - Hot or cold rolled, solution heat treated, and cold rolled full-hard (also designated TD04).

AT - Temper A followed by precipitation hardening (also designated TF00).

1/2HT - Temper 1/2H followed by precipitation hardening (also designated TH02).

HT - Temper H followed by precipitation hardening (also designated TH04).

2. APPLICABLE DOCUMENTS

The following publications form a part of this document to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order. In the event of conflict between the text of this document and references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

2.1 SAE Publications

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2222 Tolerances, Copper and Copper Alloy Sheet, Strip, and Plate

AMS-H-7199 Heat Treatment of Wrought Copper-Beryllium Alloys, Process for (Copper Alloys: Numbers C17000, C17200, C17300, C17500, and C17510)

AMS-STD-185 Identification Marking of Copper and Copper Base Alloy Mill Products

2.2 ASTM Publications

Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, www.astm.org.

ASTM B193 Resistivity of Electrical Conductor Materials

ASTM B194 Copper-Beryllium Alloy Plate, Sheet, Strip and Rolled Bar

ASTM B194 Annex - Chemical Analysis of Copper-Beryllium Alloys

ASTM B534 Copper-Cobalt-Beryllium Alloy and Copper-Nickel-Beryllium Alloy Plate, Sheet, Strip, and Rolled Bar

ASTM D3951 Packaging, Commercial

ASTM E8 Tension Testing of Metallic Materials

ASTM E18 Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials

ASTM E478 Chemical Analysis of Copper Alloys

2.3 U.S. Government Documents

Copies of these documents are available online at <http://quicksearch.dla.mil>.

MIL-C-3993 Copper and Copper Base Alloy Mill Products, Packaging of

MIL-STD-129 Marking for Shipment and Storage

3. REQUIREMENTS

3.1 Chemical Composition

The chemical composition of the alloys shall conform to the requirements shown in Table 1. These specification limits do not preclude the presence of other elements. Limits may be established by agreement between material manufacturer or supplier and purchaser for these unnamed elements. Copper is customarily given as remainder, but may be taken as the difference between the sum of all elements analyzed and 100%. When all the elements in the table are analyzed, their sum shall be 99.5% minimum.