



AEROSPACE MATERIAL SPECIFICATION

AMS2422™**REV. G**

Issued 1958-01
Reaffirmed 2019-07
Revised 2026-06

Superseding AMS2422F

Plating, Gold

RATIONALE

AMS2422G is the result of a Five-Year Review and update this specification with changes to Ordering Information, Authority (see 1.4), Definitions (see 2.4.1), surface roughness (3.1 moved to notes), Stress-Relief Treatment (see 3.1.1.3), Cleaning (see 3.1.2), Procedure (see 3.2), Surface Preparation (see 3.2.1), Copper Strike with Copper Underplate (see 3.2.2), Nickel Underplate (see 3.2.3), Gold Plating (see 3.2.4), Thickness (see 3.4.1), Corrosion Resistance (see 3.4.5), Quality (see 3.5.1 and 3.5.2), Acceptance Tests (see 4.2.1), Periodic Tests (see 4.2.2), Preproduction Tests (see 4.2.3), Sampling for Testing (see 4.3), Sampling for acceptance testing (see Table 1), Periodic Tests (see 4.3.1), Adhesion Testing (see 4.3.2.2), control factors (see 4.4.3), and Notes (see 8.6, 8.8, 8.9, 8.10, and 8.11).

NOTICE

ORDERING INFORMATION: The following information shall be provided to the plating processor by the purchaser:

1. The purchase order shall specify not less than the following:

- AMS2422G
- Plating thickness desired (see 3.4.1) and minimum thickness on internal surfaces, if required (see 3.4.1.1)
- Basis metal to be plated
- Tensile strength or hardness of steel basis metal
- Pre-plate stress relief to be performed by the plating processor (time and temperature), if different from 3.1.1
- Optional: fixture/electrical contact locations, when not specified (see 3.1.3)
- Special features, geometry, or processing present on parts that requires special attention by the plating processor
- Hydrogen-embrittlement relief to be performed by the plating processor (parameters or reference document), if different from 3.3
- Solderability, when required (see 3.4.3)
- Quantity of pieces to be plated

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 AMS2422G

For more information on this standard, visit
<https://www.sae.org/standards/content/AMS2422G/>

Documents

Standard, visit Sharing Hub

2. Parts manufacturing operations such as heat treating, forming, joining, and media finishing can affect the condition of the substrate for plating or, if performed after plating, could adversely affect the plated part. The sequencing of these types of operations should be specified by the cognizant engineering organization or the purchaser and is not controlled by this specification.
3. The parts manufacturer shall ensure that surfaces of metal parts supplied to the processor are free from blemishes, pits, tool marks, and other irregularities that will affect the quality of the finished parts (see 3.5.1).

1. SCOPE

1.1 Purpose

This specification covers the requirements for electrodeposited gold plate.

1.2 Application

This process has been used typically to improve the solderability, electrical conductivity, corrosion resistance, performance, and appearance of electronic and electrical parts, 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 that 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.

1.4 Authority

The cognizant engineering organization (CEO) may impose requirements or approve allowances that supersede the requirements in this AMS.

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 International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 1-877-606-7323 (U.S. and Canada only) or 1-724-776-4970 (outside U.S. and Canada), www.sae.org.

AMS2451	Plating, Brush, General Requirements
AMS2750	Pyrometry
AMS2759/9	Hydrogen Embrittlement Relief (Baking) of Steel Parts
ARP4992	Periodic Test for Processing Solutions
AS2390	Chemical Process Test Specimen Material
AS7766	Terms Used in Aerospace Metals Specifications

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 B117	Operating Salt Spray (Fog) Testing Apparatus
ASTM B253	Preparation of Aluminum Alloys for Electroplating
ASTM B374	Terminology Related to Electroplating
ASTM B480	Preparation of Magnesium and Magnesium Alloys for Electroplating
ASTM B487	Measurement of Metal and Oxide Coating Thicknesses by Microscopical Examination of Cross Section
ASTM B499	Measurement of Coating Thicknesses by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals
ASTM B504	Measurement of Thickness of Metallic Coatings by the Coulometric Method
ASTM B567	Measurement of Coating Thickness by the Beta Backscatter Method
ASTM B568	Measurement of Coating Thickness by X-Ray Spectrometry
ASTM B571	Qualitative Adhesion Testing of Metallic Coatings
ASTM E376	Measuring Coating Thickness by Magnetic-Field or Eddy Current (Electromagnetic) Testing Methods
ASTM F519	Mechanical Hydrogen Embrittlement Evaluation of Plating/Coating Processes and Service Environments

2.3 ASME Publications

Available from ASME, Two Park Avenue, New York, NY 10016-5990, Tel: 800-843-2763 (U.S./Canada), 001-800-843-2763 (Mexico), 646-616-3100 (outside North America), www.asme.org.

ASME B46.1 Surface Texture (Surface Roughness, Waviness, and Lay)

2.4 Definitions

Terms used in AMS are defined in AS7766 and as follows:

2.4.1 CORROSION PIT

A corrosion pit is defined as an area of localized corrosion having a depth greater than its width. Pit size may be determined by either direct dimensional measurement or by comparison to known references. Corrosion pits typically display a characteristic tail or line of red corrosion products for carbon and low-alloy steels and white corrosion products for aluminum alloys.