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Cancelled 2011-07
Stabilized 2013-06

Superseding AMS-C-26074C

Electroless Nickel Coatings

RATIONALE

AMS-C-26074D rescinds the previous cancellation and supersession, and at the same time stabilizes the document for legacy use requested by the electronic parts industry.

STABILIZATION NOTICE

AMS-C-26074D has been declared "STABILIZED" by AMS Committee B 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. The last technical update of this document occurred in August, 1998. Users of this document should refer any certification issues (e.g. exceptions listed on the certification report) to the cognizant engineering organization for their disposition. CAUTION: In many cases the purchaser is not the cognizant engineering organization (i.e. purchaser may be a sub tier supplier).

AMS Committee B recommends that the following technically equivalent (e.g. properties, fit, form, function) specification be used for future procurement. This listing does not constitute authority to substitute AMS2404 for the "STABILIZED" specification. Authority for substitution should be granted by, or approved by, the cognizant engineering organization.

AMS2404, Electroless Nickel Plating

Correlation Information:

Class	
AMS-C-26074	AMS2404 Requirement
Class 1	Class 1
Class 2	Class 2
Class 3	Class 3
Class 4	Class 4

Thickness	
AMS-C-26074	AMS2404 Requirement
Grade A	0.0010 inch (25 µm) minimum
Grade B	0.0005 inch (13 µm) minimum
Grade C	0.0015 inch (38 µm) minimum

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Documents

Document Sharing Hub

NOTE: A prior version of this document, AMS-C-26074A, was cancelled in favor of the reinstated MIL-C-26074E. MIL-C-26074E was superseded by MIL-DTL-26074F. MIL-DTL-26074F is available only to NAVSEA Nuclear personnel and has been superseded by AMS-C-26074 for the prior users of MIL-C-26074. AMS-C-26074B was therefore reinstated and designated as a noncurrent document. Subsequently, AMS2404 was updated for technical equivalency to allow supersedure of AMS-C-26074B by AMS2404. The cancellation and supersession of AMS-C-26074C was rescinded in favor of the stabilized status for this document, reflected by AMS-C-26074D. New designs should consider AMS2404, AMS2433, or other applicable specifications.

NOTICE

The original issue of this document, AMS-C-26074, was taken directly from U.S. Military Specification MIL-C-26074E, and contained only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards. The initial release of this document was intended to replace MIL-C-26074E. Any part numbers established by the original specification remain unchanged.

The original Military Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, and (b) the use of the existing government specification or standard format.

Under Department of Defense policies and procedures, any qualifications requirements and associated qualified products lists are mandatory to DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this specification.

1. SCOPE

1.1 Scope

This specification covers the requirements for electroless (autocatalytic chemical reduction) deposition of nickel-phosphorous alloy coatings on metal and composite surfaces.

1.2 Classification

1.2.1 Classes

The nickel coatings shall be classified in accordance with the thermal treatment applied subsequent to plating.

Class 1 - As plated, no subsequent heat treatment: A bake for hydrogen embrittlement relief is not considered a heat treatment.

Class 2 - Heat treated to obtain required hardness: May be used on all metals not affected by heating to 500 °F and above.

Class 3 - Aluminum alloys non-heat treatable, and beryllium alloys processed to improve adhesion of the nickel deposit.

Class 4 - Aluminum alloys, heat-treatable, processed to improve adhesion of the nickel deposit.

1.2.2 Grades

The nickel coatings shall be of the following grades:

Grade A - 0.0010-inch minimum thickness.

Grade B - 0.0005-inch minimum thickness.

Grade C - 0.0015-inch minimum thickness.

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: 877-606-7323 (inside USA and Canada) or 724-776-4970 (outside USA), www.sae.org.

AMS2430 Shot Peening, Automatic

2.2 U.S. Government Publications

Available from DLA Document Services, Building 4/D, 700 Robbins Avenue, Philadelphia, PA 19111-5094, Tel: (215) 697-6396, <http://quicksearch.dla.mil/>.

MIL-STD-1916 DoD Preferred Methods for Acceptance of Product

2.3 ANSI Publications

Available from American National Standards Institute, 25 West 43rd Street, New York, NY 10036-8002, Tel: 212-642-4900, www.ansi.org.

ANSI/ASQ Z1.4 Sampling Procedures and Tables for Inspection by Attributes

2.4 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 B 117 Method of Salt Spray (Fog) Testing

ASTM B 487 Measurement of Metal and Oxide Coatings Thickness by Microscopical Examination of a Cross Section, Method for (DOD adopted)

ASTM B 499 Standard Test Method for Measurement of Coating Thickness by the Magnetic Method: Nonmagnetic Coatings on Magnetic Basis Metals (DOD adopted)

ASTM B 567 Method for Measurement of Coating Thickness by the Beta Backscatter Method

ASTM B 568 X-Ray Spectrometry (DOD adopted)

ASTM B 571 Test Methods for Adhesion of Metallic Coatings

ASTM B 578 Test Method for Microhardness of Electroplated Coatings

ASTM E 18 Rockwell Hardness and Rockwell Superficial Hardness of Metallic Materials, Tests for (DOD adopted)

ASTM E 384 Microhardness of Materials, Test Method for

ASTM F 519 Mechanical Hydrogen Embrittlement Testing of Plating Processes and Aircraft Maintenance Chemicals (DOD adopted)