AEROSPACE MATERIAL SPECIFICATION

AMS-QQ-N-290™ REV. D

Issued 2000-07
Cancelled 2007-03
Revised 2015-07
Stabilized 2021-10

Superseding AMS-QQ-N-290C

Nickel Plating (Electrodeposited)

RATIONALE

AMS-QQ-N-290 has been declared "STABILIZED" by AMS Committee B. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because it is no longer state of the art and other documents contain similar, but not necessarily equivalent, requirements.

NOTE: Previously, this document was revised. The last technical update of this document occurred in July, 2015. 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. In many cases, the purchaser may represent a sub-tier supplier and not the cognizant engineering organization.

STABILIZED NOTICE

AMS-QQ-N-290 has been declared “STABILIZED” by SAE AMS Committee B, the Finishes, Processess, and Fluids Committee, 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.

AMS Committee B recommends that the following similar, but not identical, specification may be considered for future procurement. This listing does not constitute authority to substitute this specification for the “STABILIZED” specification.

AMS2403 Plating, Nickel, General Purpose

TO PLACE A DOCUMENT ORDER: **Tel: 877-606-7323 (inside USA and Canada)**
Tel: +1 724-776-4970 (outside USA)
Fax: 724-776-0790
Email: CustomerService@sae.org
SAE WEB ADDRESS: **http://www.sae.org**

For more information on this standard, visit
https://www.sae.org/standards/content/AMSQQN290D/

NOTICE

The original issue of this document was taken directly from U.S. Military Specification QQ-N-290A 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 AMS-QQ-N-290 is intended to replace QQ-N-290A. 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 qualification requirements and associated qualified products lists are mandatory for DOD contracts. Any requirement relating to qualified products lists (QPL's) has not been adopted by SAE and is not part of this SAE technical document.

NOTICE

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

1. Purchase order shall specify not less than the following:

    - AMS-QQ-N-290D
    - Class of plating (See 1.2.1)
    - Grade of Class 1 plating if applicable (See 1.2.2)
    - Basis metal to be plated

- Tensile strength or hardness of the basis metal
- Preplate stress relief to be performed by plating processor (time and temperature) if different from 3.2.2
- Underplating required of Class 1 plating if required (See 3.2.5)
- Control Record if required (4.3.1)
- Sampling plan (See 4.4.2)
- Number of samples for destructive testing (See 4.4.3)
- Special features, geometry or processing present on parts that requires special attention by the plating processor
- Hydrogen embrittlement relief to be performed by plating processor (parameters or reference document) if different from 3.2.11
- If plating is subject to mild or moderate service conditions (See Table 4, Note 2)
- Quantity of pieces to be plated

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 purchaser and is not controlled by this specification.

1. SCOPE

1.1 Form

These products have been used typically for electrodeposited nickel plating on steel, copper and copper alloys, and zinc and zinc alloys, but usage is not limited to such applications.

1.2 Classification

1.2.1 Classes

Electrodeposited nickel plating covered by this specification shall be of the following classes, as specified:

Class 1 - Corrosion protective plating
Class 2 - Engineering plating

1.2.2 Grades

Class 1 plating shall be of the following grades, as specified:

Grade A - 0.0016 inch thick
Grade B - 0.0012 inch thick
Grade C - 0.0010 inch thick
Grade D - 0.0008 inch thick
Grade E - 0.0006 inch thick
Grade F - 0.0004 inch thick
Grade G - 0.0002 inch thick