



AEROSPACE MATERIAL SPECIFICATION

AMS2451™/7**REV. B**

Issued 2000-08
Revised 2017-04
Reaffirmed 2022-01

Superseding AMS2451/7A

Plating, Brush, Nickel
Low Stress, Medium-Hardness Deposit

RATIONALE

AMS2451/7B is a Five-Year Review and update of this specification with a change to 3.3.

1. SCOPE

1.1 Purpose

This specification covers the requirements for brush plating of medium-hardness, low stress nickel by electrodeposition.

1.2 Application

This process has been used typically to improve wear resistance, to repair medium-hardness, low stress nickel electrodeposits and to repair damaged, worn, or mismachined parts in applications requiring hardness, fatigue resistance of parts with service temperatures up to 450 °F (232 °C), but usage is not limited to such applications.

1.3 Safety - Hazardous Materials

Shall be in accordance with AMS2451.

2. APPLICABLE DOCUMENTS

In addition to those listed in AMS2451, 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 +1 724-776-4970 (outside USA), www.sae.org.

AMS2423 Plating, Nickel, Hard Deposit

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Documents
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3. TECHNICAL REQUIREMENTS

Shall be in accordance with AMS2451 and as follows.

3.1 Procedure

3.1.1 Nickel shall be electrodeposited from a sulfamate nickel brush plating solution containing addition agents to produce the specific hardness in accordance with processing instructions from the solution manufacturer.

3.2 Properties

3.2.1 Adhesion to Specimens

The requirements of AMS2451 shall apply.

3.2.2 Hardness

The hardness of the deposit shall be 400 to 500 HV or equivalent.

3.2.3 Stress

The residual surface stress in the deposit shall be within the range of 0 to 15.0 ksi (0 to 103 MPa) compressive.

3.3 Hydrogen Embrittlement

Shall be in accordance with AMS2451.

4. QUALITY ASSURANCE PROVISIONS

Shall be in accordance with AMS2451.

5. PREPARATION FOR DELIVERY

Shall be in accordance with AMS2451.

6. ACKNOWLEDGMENT

Shall be in accordance with AMS2451.

7. REJECTIONS

Shall be in accordance with AMS2451.