



# AEROSPACE MATERIAL SPECIFICATION

**AMS2451™/5****REV. C**

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Superseding AMS2451/5B

Plating, Brush, Chromium  
Hard Deposit, Trivalent

## RATIONALE

AMS2451/5C is the result of a Five-Year Review and update of this specification which adds ordering information, adds classification (1.4), and adds a second hardness type (3.2.1).

## NOTICE

**ORDERING INFORMATION:** In addition to AMS2451, the following information shall be provided to the plating processor by the purchaser.

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

- Solution type (see 1.4.1)
- If deposit is to be cosmetic (see 3.2.1.2)

## 1. SCOPE

### 1.1 Purpose

This specification covers the requirements for brush plating of hard chromium by electrodeposition.

### 1.2 Application

This process has been used typically to improve corrosion and wear resistance, to cosmetically repair chromium deposits and to repair damaged, worn, or mis-machined parts, but usage is not limited to such applications.

### 1.3 Safety - Hazardous Materials

Shall be in accordance with AMS2451.

## 1.4 Classification

### 1.4.1 Types

Type 1: Solution resulting in 900 HK

Type 2: Solution resulting in 550 HK

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1.4.1.1 When type is not specified, Type 1 shall be supplied.

## 2. APPLICABLE DOCUMENTS

Shall be in accordance with AMS2451.

## 3. TECHNICAL REQUIREMENTS

Shall be in accordance with AMS2451 and as follows.

### 3.1 Procedure

3.1.1 Chromium shall be electrodeposited from a trivalent chromium solution in accordance with processing instructions from the solution manufacturer.

### 3.2 Properties

#### 3.2.1 Hardness

3.2.1.1 The hardness of the deposit shall be dependent on the type of solution used as follows:

Type 1: Solution resulting in 900 HK (910 HV) minimum.

Type 2: Solution resulting in 550 HK (520 HV) minimum.

3.2.1.2 If the deposit is specified as being cosmetic, the above hardness requirement does not apply.

### 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.

## 8. NOTES

Shall be in accordance with AMS2451.