



# AEROSPACE MATERIAL SPECIFICATION

**AMS5036™****REV. J**

|               |         |
|---------------|---------|
| Issued        | 1943-04 |
| Revised       | 1985-10 |
| Noncurrent    | 2001-09 |
| Reaf. Noncur. | 2015-12 |
| Stabilized    | 2020-05 |

Superseding AMS5036H

Steel Sheet and Strip, Aluminum Coated, Low Carbon

## RATIONALE

AMS5036J has been stabilized as mature technology.

## STABILIZED NOTICE

AMS5036J has been declared "STABILIZED" by SAE AMS Committee E Carbon and Low Alloy Steels. This document will no longer be updated and may no longer represent standard industry practice. This document was stabilized because it contains mature technology that is not expected to change and thus no further revisions are anticipated. Previously this document was noncurrent. The last technical update of this document occurred in October 1985. 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. NOTE: In many cases, the purchaser may represent a sub-tier supplier and not the cognizant engineering organization.

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Full document details: SAE AMS5036J

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## 1. SCOPE:

### 1.1 Form:

This specification covers a low-carbon steel in the form of sheet and strip coated on both faces with aluminum-silicon alloy by the hot-dip process.

### 1.2 Application:

Primarily for low-stressed parts, such as brackets, clips, and sheathing, requiring corrosion resistance and oxidation resistance up to 1200°F (650°C).

## 2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

### 2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

#### 2.1.1 Aerospace Material Specifications:

|          |                                                                                                               |
|----------|---------------------------------------------------------------------------------------------------------------|
| AMS 2232 | Tolerances, Carbon Steel Sheet, Strip, and Plate                                                              |
| MAM 2232 | Tolerances, Metric, Carbon Steel Sheet, Strip, and Plate                                                      |
| AMS 2259 | Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels                                           |
| AMS 2350 | Standards and Test Methods                                                                                    |
| AMS 2370 | Quality Assurance Sampling of Carbon and Low-Alloy Steels, Wrought Products Except Forgings and Forging Stock |

### 2.2 ASTM Publications:

Available from American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.

|           |                                                                                                            |
|-----------|------------------------------------------------------------------------------------------------------------|
| ASTM B117 | Salt Spray (Fog) Testing                                                                                   |
| ASTM E290 | Semi-Guided Bend Test for Ductility of Metallic Materials                                                  |
| ASTM E350 | Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron |

### 2.3 U.S. Government Publications:

Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

#### 2.3.1 Military Standards:

MIL-STD-163 Steel Mill Products, Preparation for Shipment and Storage

## 3. TECHNICAL REQUIREMENTS:

### 3.1 Composition:

- 3.1.1 Basis Steel: Shall conform to the following percentages by weight, determined by wet chemical methods in accordance with ASTM E350 or by spectrographic or other analytical methods approved by purchaser:

|            | min  | max  |
|------------|------|------|
| Carbon     | --   | 0.10 |
| Manganese  | 0.25 | 0.50 |
| Phosphorus | --   | 0.04 |
| Sulfur     | --   | 0.05 |

- 3.1.1.1 Check Analysis: Composition variations shall meet the applicable requirements of AMS 2259.

- 3.1.2 Coating: Shall consist of a uniform layer of an aluminum-silicon (5 - 11% silicon) alloy on each side of the steel sheet or strip.

### 3.2 Condition:

Aluminum killed, cold rolled, and rerolled after coating.

### 3.3 Properties:

The product shall conform to the following requirements:

- 3.3.1 Corrosion Resistance: The product shall show no evidence of corrosion of the basis steel when subjected for not less than 200 hr to a continuous salt spray corrosion test in accordance with ASTM B117. Corrosion of basis steel at cut edges shall be disregarded.