

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
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New York City

## AMS 5036 A

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### STEEL SHEET AND STRIP, ALUMINUM COATED Low Carbon

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for low stressed parts, such as brackets, clips, and sheathing, requiring corrosion resistance and oxidation resistance up to 1200 F.
3. **COMPOSITION (Basis Steel):**

		Check Analysis	
		Under Min	Over Max
Carbon	0.10 max	--	0.03
Manganese	0.25 - 0.50	0.03	0.03
Phosphorus	0.040 max	--	0.01
Sulfur	0.050 max	--	0.01

4. **CONDITION:** Made from cold rolled sheet, then rerolled after coating.
5. **TECHNICAL REQUIREMENTS:**
  - 5.1 **Coating:** Shall consist of a uniform layer of aluminum on each side of the steel sheet.
  - 5.2 **Corrosion Resistance:** Material shall show no evidence of corrosion of the basis steel when subjected to salt spray test in accordance with ASTM B117-44T for 200 hours. Corrosion of basis steel at cut edges shall be disregarded.
  - 5.3 **Bending:**
    - 5.3.1 Material shall withstand, without flaking or peeling of the coating, bending at room temperature through an angle of 180 degrees around a diameter equal to two times the nominal thickness of the material, with axes of bends both perpendicular and parallel to the direction of rolling.
    - 5.3.2 Material shall withstand, without cracking of the basis steel, bending at room temperature flat on itself, with axis of bend parallel to the direction of rolling.
6. **QUALITY:** Material shall be uniform in quality and condition, commercially straight and flat, clean, sound, smooth, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.
7. **TOLERANCES:** Unless otherwise specified, thickness and width tolerances shall conform to the following:

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## 7.1 Thickness:

<u>Nominal Thickness, Inch</u>	<u>Tolerance, Inch. Plus and Minus</u>
Under 0.020	0.003
0.020 to 0.029, incl	0.004
Over 0.029 to 0.049, incl	0.005
Over 0.049 to 0.069, incl	0.006
Over 0.069 to 0.079, incl	0.007
Over 0.079 to 0.089, incl	0.008
Over 0.089	0.009

7.2 Width: Table III in the latest issue of AMS 2232.

## 8. REPORTS:

8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a notarized report of the results of tests for chemical composition of the steel in each heat in the shipment. This report shall include the purchase order number, heat number, material specification number, thickness, size and quantity from each heat.

8.2 Unless otherwise specified, the vendor of finished or semi-finished parts shall furnish with each shipment three copies of a notarized report showing the purchase order number, material specification number, contractor or other direct supplier of material, part number, and quantity. When material for making parts is produced or purchased by the parts vendor, that vendor shall inspect each lot of material to determine conformance to the requirements of this specification, and shall include in the report a certification that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.

9. IDENTIFICATION: Unless otherwise specified, each sheet and strip shall be marked with AMS 5036A, manufacturer's identification, and nominal thickness in inches. The characters shall be not less than 3/8 in. in height and shall be applied using a suitable marking fluid. The characters shall be sufficiently stable to withstand ordinary handling.

9.1 Flat Sheet, and Flat Strip over 6 in. in Width: Shall be marked in rows of recurring characters with rows parallel to the direction of rolling and spaced approximately 3 in. apart with alternate rows staggered.

9.2 Flat Strip 6 in. and Under in Width: Shall be marked near one end.

9.3 Coiled Sheet and Strip: Shall be marked near the outside end of the coil, and, where practicable, near the inside end also.

## 10. PACKAGING:

10.1 When material is shipped in less than carload lots, it shall be properly bundled or boxed to prevent loss or damage during transit. When shipped in carload lots, material shall be properly braced and supported to keep it from shifting during transit.

10.2 Sheet shall be shipped flat and not more than one size shall be shipped in one bundle or box.