

- 5.3 Hardness: Shall be not higher than Vickers 225 or equivalent.
- 5.4 Bending: Material shall withstand, without cracking, bending at room temperature through the angle indicated below around a diameter equal to two times the nominal thickness of the material, with axis of bend parallel to the direction of rolling.

Nominal Thickness Inches	Angle deg, min
0.001 to 0.060, incl	180
Over 0.060	90

- 5.5 Microstructure: Material recrystallized as in 5.1 shall show a structure consisting essentially of recrystallized grains; standards for acceptance shall be as agreed upon by purchaser and vendor.
- 5.6 Tensile Properties at 2200 F (1204.4 C): Material 0.010 - 0.060 in., incl, in thickness shall be capable of meeting the following requirements when heated to 2200 F \pm 10 (1204.4 C \pm 5.6) under vacuum (less than 0.1 micron mercury) or an inert atmosphere, held at heat for 15 min. before testing, and tested at 2200 F \pm 10 (1204.4 C \pm 5.6) at a strain rate of 0.03 - 0.07 in. per in. per min. in accordance with ASTM E21:

Tensile Strength, psi	30,000 min
Yield Strength at 0.2% Offset, psi	25,000 min
Elongation, % in 1 in.	15 min

- 5.6.1 For widths 9 in. and over, tensile test specimens shall be taken with the axis perpendicular to the direction of rolling. For widths less than 9 in., tensile test specimens shall be taken with the axis parallel to the direction of rolling.
- 5.6.2 Properties of material with thicknesses less than 0.010 in. or greater than 0.060 in. shall be as agreed upon by purchaser and vendor.
- 6. QUALITY: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.
- 7. TOLERANCE: Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2242 except for flatness.
- 7.1 Flatness: When measured using a straight-edge touching the product at two points, the perpendicular distance from the straight-edge to the sheet or plate shall not exceed 0.05 x L in. at any point between the two points of contact, where "L" is the distance in inches between the two points of contact.

8. REPORTS:

- 8.1 Unless otherwise specified, the vendor of the product shall furnish with each shipment three copies of a report of the results of tests for chemical composition of each heat in the shipment and the results of tests on each thickness from each heat to determine conformance to the technical requirements of this specification. 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 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 statement that the material conforms, or shall include copies of laboratory reports showing the results of tests to determine conformance.