

- 6.1.2 Bars over 0.75 to 1.50 in., incl, in diameter or distance between parallel sides shall have hardness of Brinell 163-255 or equivalent.
- 6.1.3 Bars over 1.50 in. in diameter or distance between parallel sides shall have hardness of Brinell 140-241 or equivalent.
- 6.2 Embrittlement: The product shall be capable of meeting the following test:
- 6.2.1 Test specimens, after being heated at 1200 F for 2 hr and air cooled, shall withstand immersion for 48 hr in a boiling aqueous solution containing 100 g of $\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ and 100 ml of H_2SO_4 (sp gr 1.84) per liter of solution under a reflux condenser, without evidence of inter-crystalline surface attack. After such immersion, the specimens shall withstand, without cracking, bending at room temperature through an angle of 180 degrees around a diameter equal to the thickness of the specimen.
7. QUALITY: Material shall be uniform in quality and condition, sound, and free from foreign materials and from internal and external defects, consistent with the type of steel involved, detrimental to fabrication or to performance of parts.
8. TOLERANCES: Unless otherwise specified, tolerances shall conform to the latest issue of AMS 2241 as applicable and as specified below:
- 8.1 Diameter or thickness of all hexagons, and other shapes of bars 2.75 in. and less in diameter or distance between parallel sides, shall conform to Table I.
- 8.2 Diameter or thickness of bars, other than hexagons, over 2.75 in. in diameter or distance between parallel sides shall conform to Table II.
9. REPORTS:
- 9.1 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. This report shall include the purchase order number, heat number, material specification number, size, and quantity from each heat. If forgings are supplied, the part number and size of stock used to make the forgings shall also be included.
- 9.2 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.
10. IDENTIFICATION:
- 10.1 Bars: Individual pieces or bundles shall have attached a metal tag stamped with the purchase order number, AMS 5642B, nominal size, and heat number, or shall be boxed and the box marked with the same information. In addition to the above identification, flats 2 x 1 in. and larger and other bars 1 in. and over in diameter or distance between parallel sides shall be stamped with the heat number within 2 in. of one end.