

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS2418A

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COPPER PLATING

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION:
 - 2.1 Primarily to provide an anti-seize surface.
 - 2.2 To provide a shield for selective carburizing, for prevention of decarburizing, or for a source of copper for furnace brazing.
3. PREPARATION:
 - 3.1 All welding or brazing (except when copper plate is used as a source of copper for brazing) shall be completed before parts or assemblies are plated.
 - 3.2 Before placing the parts in the plating solution, they shall have chemically clean surfaces prepared with minimum abrasion, erosion, or pitting.
4. PROCEDURE:
 - 4.1 The plating process consists of electrodeposition of copper from a conventional copper cyanide solution directly on the metal part or from a high speed copper cyanide solution following a "copper strike", except that in the case of parts made of corrosion-resistant steels, a preliminary flash of nickel or other suitable metal is permissible.
 - 4.2 Unless otherwise specified, after plating, rinsing and drying, all parts having hardnesses higher than Rockwell C 40 that are not to be subsequently carburized, heat treated or brazed, shall be suitably heated to relieve possible embrittlement. Temperatures to which parts are heated shall in no case be so high as to reduce the hardness of the basis metal below drawing limits but shall be not lower than 300 F, for not less than one hour, unless otherwise specified. At higher temperatures, the time may be shortened.
5. THICKNESS:
 - 5.1 AMS 2418 shall designate plate thickness of 0.0005-0.0007 inch.
 - 5.2 Other plate thicknesses may be specified by this specification number and a suffix number designating the minimum thickness in ten thousandths of an inch; thus AMS 2418-1 designates a thickness of 0.0001-0.0003 in., AMS 2418-6 designates a thickness of 0.0006-0.0008 in. A tolerance of +0.0002 in. on thickness is allowed, unless otherwise specified.
 - 5.3 Where "copper flash" is specified, the thickness of copper shall be approximately 0.0001 in.

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