



# AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

## AMS 2412E

Superseding AMS 2412D

Issued 8-1-45

Revised 5-1-69

### SILVER PLATING Copper Strike, Low Bake

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily to provide a bearing surface and to prevent galling or seizing of metal surfaces of parts made of materials where a high baking temperature may be detrimental to the properties of the basis material.
3. PREPARATION:
  - 3.1 Unless otherwise specified, roughness of surfaces to be plated on parts other than nuts shall not exceed 80 microinches prior to cleaning.
  - 3.2 Parts shall be chemically clean when immersed in plating solutions.
  - 3.3 Electrical contacts between the parts and supporting wires or fixtures and between supporting wires and fixtures and bus bar shall be made in such manner as will ensure that neither chemical or immersion deposition nor electrical arcing or localized overheating will occur. If parts are to be plated all over, contact points between the parts and the plating fixture shall, except in the case of barrel plating, be located where specified on the drawing or as agreed upon by purchaser and vendor. If parts are not required to be plated all over, contact points shall be located in areas on which plating is not required or is optional.
4. PROCEDURE:
  - 4.1 Unless otherwise specified, plating of parts shall be conducted in the following sequence, except that the copper strike may be omitted in plating copper base alloys; process shall be approved by purchaser.
    1. Copper Strike
    2. Silver Strike
    3. Silver Plate
  - 4.2 Unless otherwise specified, all parts except nuts shall be heated to 300 - 500 F (148.9 - 260 C) after plating and held at heat for not less than 2 hr, unless such heating would lower hardness to below drawing limits or otherwise deleteriously affect the parts, in which case heating shall be at the highest practicable temperature which will maintain specified properties. Parts shall be so heated as to prevent harmful oxidation.
5. THICKNESS:
  - 5.1 Where "silver flash" is specified, plate thickness shall be approximately 0.0001 inch.
  - 5.2 Thickness of plate other than flash shall be as specified on drawing. If machining of plated metal is required, plate thickness as deposited shall be sufficient to allow machining of all areas of plated surfaces to the dimensions specified on the drawing.

SAE Technical Board rules provide that: "All technical reports, including standards, applications, and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report. In formulating and approving technical reports, the Board and its Committees will not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against infringement of patents."