

# AERONAUTICAL MATERIAL SPECIFICATION

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29 West 39th Street  
New York City

AMS 2665

Issued 12-1-47

Revised

## SILVER BRAZING

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Joining iron, copper and nickel alloys by the use of silver brazing alloys.
3. PROCESS REQUIREMENTS:
  - (a) Surface Condition.— The surfaces to be joined shall be cleaned prior to assembly. Surfaces shall not be highly polished.
  - (b) Fluxing.— Unless otherwise specified, flux conforming to AMS 3410 shall be applied so that the surfaces to be joined are completely coated.
  - (c) Assembly.— The parts to be joined shall be assembled so that the clearances between mating surfaces are within the tolerances specified on the drawing. (Note: A clearance of 0.0015 inch on a side is considered optimum.) The assembly should be supported so that the parts will be in proper alignment after brazing.
  - (d) Brazing Material.— Unless otherwise specified, silver brazing alloy shall conform to AMS 4770. Sufficient brazing alloy shall be placed within, or in close proximity to, the joint.
  - (e) Joining.— Unless otherwise specified, heating and joining may be effected by any of the following methods: furnace, electrical induction, electrical resistance, molten salt, molten brazing alloy, torch or burner. Furnace brazing shall be performed in a suitable protective atmosphere. Parts shall be heated until the brazing alloy melts and the joint is formed. Further heating shall be held to a minimum. For furnace heating the furnace temperature during brazing shall not exceed 1350 F unless otherwise specified. For immersion heating the temperature of the immersion medium shall not exceed 1250 F unless otherwise specified.
  - (f) Cooling.— After brazing, and prior to handling, assemblies shall be cooled for a sufficient time to allow the brazing alloy to solidify and in such a manner as to prevent cracks and minimize internal stress, distortion and scaling.
  - (g) Flux Removal.— After brazing and cooling, flux shall be removed from the parts by a method not injurious to the specified surface finish.
4. QUALITY:
  - (a) Visual examination of joints shall show at all joint edges a complete line or ring of silver brazing material.