

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
29 West 39th Street
New York City

AMS 3414A

Issued 5-1-48

Revised 2-15-52

FLUX, ALUMINUM WELDING

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Powder.
3. **APPLICATION:** Gas welding of aluminum and aluminum alloys at temperatures of 1150 F and above.
4. **GENERAL REQUIREMENTS:**
 - 4.1 Flux shall be a finely ground and uniformly blended mixture, free of all substances which might adversely affect its serviceability.
 - 4.2 Flux shall not harden in the container. A slight amount of agglomeration is permissible provided the lumps can be readily broken into a powder no coarser than the remainder of the material.
 - 4.3 Flux, when mixed with water in the proportions of 3 to 1 by weight, with or without a suitable wetting agent as desired, shall form a smooth paste having acceptable fusibility and fluxing characteristics. Flux shall permit production of satisfactorily welded joints of any type on applicable aluminum alloys.
 - 4.4 Flux shall not produce, during use, a flame or smoke of sufficient intensity to obscure the work.
 - 4.5 Flux shall not produce toxic or suffocating fumes under normal conditions of use.
 - 4.6 Flux shall be readily removed by water at 190 F, after being subjected to welding operations.
5. **TECHNICAL REQUIREMENTS:**
 - 5.1 Flux shall not contain more than 5% water by weight.
 - 5.2 On heating, flux shall fuse at 1150 F or lower; on cooling from 1250 F or higher flux shall remain in the liquid state until the temperature drops to 1150 F or lower.
6. **REPORTS:** Unless otherwise specified, the vendor of flux shall furnish with each shipment three copies of a report stating that the flux conforms to the requirements specified. This report shall include the purchase order number, material specification number and title, batch number, date of manufacture, and quantity.
7. **PACKAGING:**
 - 7.1 Flux shall be supplied in 4-oz, 8-oz, 16-oz, or 5-lb glass containers as ordered, unless otherwise specified.

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