

AERONAUTICAL MATERIAL SPECIFICATIONS

AMS 3430

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Revised

PASTE, COPPER BRAZING Water Thinning

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily as a source of copper for brazing, particularly where use of inserts of copper wire or sheet is impractical and where carburization of the metals being joined is undesirable.
3. COMPOSITION:
 - 3.1 Product (by weight):

Active Ingredients	70% min
Vehicle	29% max
Emulsifying Agent	1% max
 - 3.1.1 Active Ingredients: Shall consist of not less than 97% cuprous oxide (Cu_2O). The remainder shall be essentially cupric oxide (CuO) and metallic copper.
 - 3.1.2 Vehicle: Shall consist of approximately equal proportions, by weight, of water and ethylene glycol.
 - 3.1.3 Emulsifying Agent: Shall consist of algin or petroleum sulfonate or a mixture thereof.
4. TECHNICAL REQUIREMENTS:
 - 4.1 General:
 - 4.1.1 Paste shall be an intimately blended mixture of uniform consistency. It shall not separate in container to such an extent that it cannot be returned to uniform consistency by stirring.
 - 4.1.2 Paste, diluted with water or ethylene glycol as required, shall have acceptable application characteristics.
 - 4.2 Properties:
 - 4.2.1 The active ingredients shall be of such fineness that not more than 0.5% by weight shall be retained on a No. 325 screen.
 - 4.2.2 When paste is applied to a steel test panel, heated to $2050\text{ F} \pm 25$ and held at heat for 30 min. in a hydrogen atmosphere having dew point not higher than -40 F , and cooled to 1000 F or lower in a protective atmosphere, the active ingredient shall be reduced completely to metallic copper and shall melt and flow freely and the vehicle and emulsifying agent shall burn off leaving no carbonaceous residue and without causing carburization of the panel.