AEROSPACE
MATERIAL SPECIFICATIONS
SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

AMS 4191A

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ALUMINUM ALLOY WELDING ROD AND WIRE
6.3Cu - 0.3Mn - 0.18Zr - 0.15Ti - 0.10V (2319)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.

2. APPLICATION: Primarily for use as filler metal for inert gas arc welding of high temperature aluminum alloys where the joint is capable of being heat treated to high strength.

3. COMPOSITION:

Copper	5.8 - 6.8
Manganese	0.20 - 0.40
Zirconium	0.10 - 0.25
Titanium	0.10 - 0.20
Vanadium	0.05 - 0.15
Iron	0.30 max
Silicon	0.20 max
Zinc	0.10 max
Magnesium	0.02 max
Beryllium	0.0008 max
Other Impurities, each	0.05 max
Other Impurities, total	0.15 max
Aluminum	remainder

4. CONDITION: As drawn, unless otherwise specified.

5. TECHNICAL REQUIREMENTS:

5.1 Welding: Melted wire shall flow smoothly and evenly during welding and be capable of producing acceptable welds.

5.2 Spooled Wire: Shall conform to the following, unless otherwise agreed upon by purchaser and vendor.

5.2.1 Winding: Wire shall be closely wound so as to avoid producing kinks, waves, and sharp bends; and shall be free to unwind without restriction caused by overlapping or wedging. The outside end of the spooled wire shall be so treated that it may be readily located.

6. QUALITY: Wire shall be uniform in quality and condition, clean, sound, smooth, and free from foreign materials and from internal and external imperfections detrimental to welding operations, operation of welding equipment, or properties of the deposited weld metal.

7. SIZES AND TOLERANCES: Unless otherwise specified, wire shall be supplied in the following sizes and to the tolerances shown:

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