

1.0 Scope

1.1 This standard covers aluminum alloy round wire, cold heading quality, intended for the manufacture of blind rivet mandrels and blind rivet bodies.

1.2 In case of conflict, the requirements in the purchase order, on the drawing, in the purchaser's specification, and in this general standard shall prevail in the sequence named.

1.3 The values stated in inch-pound units are to be regarded as standard.

2.0 Applicable Documents

2.1 ASTM Standards

B316 – Aluminum Alloy Rivet and Cold Heading Wire and Rods

B557 – Tension Testing Wrought and Cast Aluminum and Magnesium Alloy Products

E29 – Recommended Practice for Indicating Which Places of Figures are to be Considered Significant in Specified Limiting Values

E34 – Chemical Analysis of Aluminum and Aluminum Alloys

E112 – Estimating the Average Grain Size of Metals

2.2 Federal Specifications

QQ-A-430 – Aluminum Alloy Rod and Wire, for Rivets and Cold Heading

2.3 Military Standards

MIL-H-6088 – Heat Treatment of Aluminum Alloys

3.0 General Requirements for Delivery

3.1 The material shall be packaged in such a manner as to prevent damage in ordinary handling and transportation. The type of packing and gross weight of individual containers shall be left to the discretion of the supplier unless otherwise agreed upon. Each package or container shall contain only one size, alloy, or temper of material when packed for shipment unless otherwise agreed upon.

4.0 Ordering Information

4.1 Orders for wire to this standard may include the following:

4.1.1 Quantity (weight)

4.1.1.1 Total order

4.1.1.2 Weight of individual coil

4.1.2 Name of material (aluminum wire cold heading quality for blind rivet mandrels or blind rivet bodies), and alloy designation number

4.1.3 Dimensions

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- 4.1.3.1 Wire diameter (see 9.1)
- 4.1.3.2 Coil diameter, stating minimum inside diameter and maximum outside diameter
- 4.1.4 Thermal treatment (see 5.3)
- 4.1.5 Aluminum grade (see Table 1)
- 4.1.6 Mechanical properties (see 8.1)
 - 4.1.6.1 Tensile strength range (psi)
 - 4.1.6.2 Wire break load range (lbs)
- 4.1.7 Coating, type and thickness (see 10.4)
- 4.1.8 Grain size, if desired (see 7.1)
- 4.1.9 Cast or heat analysis, if desired (see 6.2)
- 4.1.10 Packaging (see 11.1)
- 4.1.11 IFI designation and date of issue
- 4.1.12 Special requirements, if any
- 4.1.13 Delivery date requested
- 4.1.14 Desired freight mode and delivery instructions.

NOTE: Typical ordering descriptions are as follows:

15,000 lbs Round Aluminum Wire, Cold Heading Quality, 0.076 in. diameter, Grade AA 2024 for blind rivet mandrels, 62,000 psi min tensile strength. Coil weight 100 lbs, 30 in. O.D., 22 in. I.D. Furnish certification of analysis for each heat, to IFI-133 dated July 1984.

12,000 lbs Round Aluminum Wire, Cold Heading Quality, 0.373 in. diameter, Grade AA 5056 H13 for blind rivet bodies. Coil weight 500 lbs, 34 in. O.D., 22 in. I.D. Coils to be racked on 45 in. nominal height tubular carriers with the 4 vertical rack members to be covered with fiber sleeves to protect inside of coil. Each loaded carrier to be covered with plastic shrouding. Furnish certification of analysis for each heat to IFI-133 dated July 1984.

5.0 Manufacture

5.1 Process. Aluminum wire shall be produced by extruding, rolling or drawing, or a combination thereof, at the option of the wire producer.

5.2 Internal Soundness. Wire shall be uniform in quality; free from hard spots, laps, cracks, seams and other injurious defects within the limits consistent with best commercial practice.

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