

RIVETS, BLIND, CORROSION RESISTANT ALLOY  
67Ni - 31Cu

UNS N04405

1. SCOPE:

1.1 Form: This specification covers tubular, blind rivets fabricated from a corrosion-resistant nickel-copper alloy.

1.2 Application: Primarily for use in blind or open locations requiring high shear strength and corrosion resistance up to 800°F (425°C).

2. APPLICABLE DOCUMENTS: The following publications form a part of this specification to the extent specified herein. The latest issue of Aerospace Material Specifications shall apply. The applicable issue of other documents shall be as specified in AMS 2350.

2.1 SAE Publications: Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096.

2.1.1 Aerospace Material Specifications:

AMS 2350 - Standards and Test Methods

AMS 4674 - Alloy Bars and Forgings, Corrosion Resistant, 67Ni - 30Cu -  
0.04S, Free Machining

AMS 4675 - Alloy Bars and Forgings, Corrosion Resistant, 67Ni - 30Cu

AMS 4730 - Nickel-Copper Alloy Wire, Corrosion Resistant, 67Ni - 31Cu,  
Annealed

2.2 U.S. Government Publications: Available from Commanding Officer, Naval Publications and Forms Center, 5801 Tabor Avenue, Philadelphia, PA 19120.

2.2.1 Military Standards:

MIL-STD-794 - Parts and Equipment, Procedures for Packaging and Packing of  
MIL-STD-1312 - Fasteners, Test Methods

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# AMS 7234D

## 3. TECHNICAL REQUIREMENTS:

### 3.1 Composition:

3.1.1 Hollow Portion: Shall conform to AMS 4730, except that sulfur may be as high as 0.060 percent.

3.1.2 Self-Plugging Stem or Mandrel: Shall conform to AMS 4730, except that sulfur may be as high as 0.060 percent.

3.1.3 Pull-Through Stem or Mandrel: Shall be low-carbon steel.

3.1.4 Locking Collar: Shall conform to AMS 4674 or AMS 4675, unless otherwise specified, when the locking collar is a separate piece.

### 3.2 Condition:

3.2.1 Hollow Portion: Cold headed, unless purchaser permits machining of the head, pierced or drilled, annealed, and descaled if necessary. It shall be fabricated from wire cold drawn from hot finished wire or rod which has been previously ground or has had surface preparation (other than by pickling) for removal of seams and other injurious imperfections.

3.2.2 Self-Plugging Stem or Mandrel: Cold headed, unless purchaser permits machining from cold worked material. It shall be fabricated from wire cold drawn from hot finished wire or rod.

3.3 Properties: Rivets shall conform to the following requirements:

#### 3.3.1 Self-Plugging Rivets:

3.3.1.1 Shear Strength: Shall be not lower than 52,000 psi (360 MPa) determined in accordance with MIL-STD-1312, Test No. 4, using a fixture with shear blade thickness at the rivet contact area not less than one-half the installed shank diameter of the rivet.

3.3.1.2 Retention of Stem: Stems of installed rivets shall withstand an axial force of 15 lb (65 N) without being forced out of the rivet.

3.4 Quality: Rivets, as received by purchaser, shall be uniform in quality and condition, sound, smooth, and free from foreign materials and from imperfections detrimental to their performance.

## 4. QUALITY ASSURANCE PROVISIONS:

4.1 Responsibility for Inspection: The vendor of rivets shall supply all samples for vendor's tests and shall be responsible for performing all required tests. Results of such tests shall be reported to the purchaser as required by 4.4. Purchaser reserves the right to sample and to perform any confirmatory testing deemed necessary to ensure that the rivets conform to the requirements of this specification.

#### 4.2 Classification of Tests:

4.2.1 Acceptance Tests: Tests to determine conformance to requirements for composition (3.1) and shear strength (3.3.1.1) are classified as acceptance tests and shall be performed on each lot.

4.2.2 Periodic Tests: Tests to determine conformance to requirements for retention of stem (3.3.1.2) are classified as periodic tests and shall be performed at a frequency selected by the vendor unless frequency of testing is specified by purchaser.

4.3 Sampling: Shall be in accordance with the following; a lot shall be all rivets of the same part number manufactured from the same heats of materials and presented for vendor's inspection at one time:

#### 4.3.1 Acceptance Tests:

4.3.1.1 Composition: One sample from each heat.

4.3.1.2 Shear Strength: One sample, consisting of five rivets, from each lot.

4.3.2 Periodic Tests: As agreed upon by purchaser and vendor.

4.4 Reports: The vendor of rivets shall furnish with each shipment a report stating that the rivets conform to the condition, chemical composition, and other technical requirements of this specification. This report shall include the purchase order number, AMS 7234D, part number, and quantity.

4.5 Resampling and Retesting: If any rivet or specimen used in the above tests fails to meet the specified requirements, disposition of the rivets may be based on the results of testing three additional rivets or specimens for each original nonconforming specimen. Failure of any retest rivet or specimen to meet the specified requirements shall be cause for rejection of the rivets represented and no additional testing shall be permitted. Results of all tests shall be reported.

#### 5. PREPARATION FOR DELIVERY:

##### 5.1 Packaging and Identification:

5.1.1 Rivets of different part numbers shall be packed in separate containers.

5.1.2 Each container shall be marked with not less than the following information:

RIVETS, BLIND, CORROSION RESISTANT ALLOY

AMS 7234D

PART NUMBER \_\_\_\_\_

PURCHASE ORDER NUMBER \_\_\_\_\_

QUANTITY \_\_\_\_\_

MANUFACTURER'S IDENTIFICATION \_\_\_\_\_