MATERIAL SPECIFICATION

AEROSPACE



AMS4122™

Issued Revised 2019-08

1945-10

REV. M

Superseding AMS4122L

Aluminum Alloy Bars, Rods, and Wire Rolled or Cold Finished, and Rings 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (7075-T6, 7075-T651) Solution and Precipitation Heat Treated (Composition similar to UNS A97075)

RATIONALE

AMS4122M prohibits unauthorized changes (3.6), revises condition (3.2), properties (Table 2, 3.3.1), reports (4.4.1), and identification (5.1.1.1), and results from a Five-Year Review and update of this specification.

- 1. SCOPE
- Form 1.1

This specification covers an aluminum alloy in the form of rolled or cold finished bars, rods, and wire, and of flash welded rings conforming to the dimensions listed in Table 2 (see 8.4).

1.2 Application

These products have been used typically for parts requiring high strength where limited formability is acceptable.

- 1.2.1 Certain design and processing procedures may cause these products to become susceptible to stress-corrosion cracking; ARP823 recommends practices to minimize such conditions.
- 2. APPLICABLE DOCUMENTS

The issue of the following documents in effect on the date of the purchase order forms a part of this specification to the extent specified herein. The supplier may work to a subsequent revision of a document unless a specific document issue is specified. When the referenced document has been cancelled and no superseding document has been specified, the last published issue of that document shall apply.

SAE Publications 2.1

Available from SAE International, 400 Commonwealth Drive, Warrendale, PA 15096-0001, Tel: 877-606-7323 (inside USA and Canada) or +1 724-776-4970 (outside USA), www.sae.org.

AMS2355 Quality Assurance, Sampling and Testing, Aluminum Alloys and Magnesium Alloy, Wrought Products (Except Forging Stock), and Rolled, Forged, or Flash Welded Rings AMS2772 Heat Treatment of Aluminum Alloy Raw Materials AMS4186 Aluminum Alloy Bars, Rods, and Wire, Rolled or Cold Finished, 5.6Zn - 2.5Mg - 1.6Cu - 0.23Cr (7075-F), As Fabricated

SAE Technical Standards Board Rules provide that: "This report is published by SAE to advance the state of technical and engineering sciences. The use of this report is entirely voluntary, and its applicability and suitability for any particular use, including any patent infringement arising therefrom, is the sole responsibility of the user."

SAE reviews each technical report at least every five years at which time it may be revised, reaffirmed, stabilized, or cancelled. SAE invites your written comments and suggestions.

Copyright © 2019 SAE International

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of SAE.

TO PLACE A DOCUMENT ORDER: Tel: 877-606-7323 (inside USA and Canada) Tel: +1 724-776-4970 (outside USA) Fax: 724-776-0790 Email: CustomerService@sae.org http://www.sae.org

SAE values your input. To provide feedback on this Technical Report, please visit http://standards.sae.org/AMS4122M

Downloaded from SAE International by Univ of Toronto, Thursday, September 23, 2021				
SAE INTERNATION	NAL AMS4122™M	Page 2 of 5		
AMS7488	Rings, Flash Welded, Aluminum and Aluminum Alloys			
ARP823	Minimizing Stress-Corrosion Cracking in Wrought Heat-Treatable Aluminum Allog	y Products		
ARP1917	Clarification of Terms Used in Aerospace Metals Specifications			
2.2 ASTM Publications				
Available from ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428-2959, Tel: 610-832-9585, <u>www.astm.org</u> .				
ASTM B660	Packaging/Packing of Aluminum and Magnesium Products			
ASTM B666/B666M	Identification Marking of Aluminum and Magnesium Products			
ASTM E10	Brinell Hardness of Metallic Materials			
2.3 ANSI Accredited Publications				
Copies of these documents are available online at http://webstore.ansi.org/.				
ANSI H35.1/H35.1M	Standard Alloy and Temper Designation System for Aluminum			
ANSI H35.2	Dimensional Tolerances for Aluminum Mill Products			
ANSI H35.2M	Dimensional Tolerances for Aluminum Mill Products (Metric)			

3. TECHNICAL REQUIREMENTS

3.1 Composition

Shall conform to the percentages by weight shown in Table 1; determined in accordance with AMS2355.

Element	Min	Max
Silicon		0.40
Iron		0.50
Copper	1.2	2.0
Manganese		0.30
Magnesium	2.1	2.9
Chromium	0.18	0.28
Zinc	5.1	6.1
Titanium		0.20
Other Elements, each		0.05
Other Elements, total		0.15
Aluminum	remainder	

Table 1 - Composition