SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

AMS-QQ-A-225/2A

Issued JUL 1997
Cancelled APR 2007

Superseding AMS-QQ-A-225/2

Aluminum Alloy, Bar, Rod, and Wire, Rolled, Drawn, or Cold Finished, 3003

(Composition similar to UNS A93003)

RATIONALE

AMS-QQ-A-225/2 has been cancelled and superseded because equivalent technical requirements are provided by ASTM B 211, Alloy 3003.

CANCELLATION NOTICE

This specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of April, 2007, and has been superseded by ASTM B 211, Alloy 3003. The requirements of the latest issue of ASTM B 211, Alloy 3003 shall be fulfilled whenever reference is made to the cancelled AMS-QQ-A-225/2. By this action, this document will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, noting that it has been superseded by ASTM B 211, Alloy 3003.

Cancelled specifications are available from SAE.

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A93003

NOTICE

This document has been taken directly from Federal Specification QQ-A-225/2D and contains only minor editorial and format changes required to bring it into conformance with the publishing requirements of SAE technical standards.

The original Federal Specification was adopted as an SAE standard under the provisions of the SAE Technical Standards Board (TSB) Rules and Regulations (TSB 001) pertaining to accelerated adoption of government specifications and standards. TSB rules provide for (a) the publication of portions of unrevised government specifications and standards without consensus voting at the SAE Committee level, (b) the use of the existing government specification or standard format, and (c) the exclusion of any qualified product list (QPL) sections.

The complete requirements for procuring 3003 aluminum alloy bar, rod, and wire, rolled, drawn, or cold finished shall consist of this specification and the latest issue of AMS-QQ-A-225.

1. SCOPE AND CLASSIFICATION:

1.1 Scope:

This specification covers the specific requirements for 3003 aluminum alloy bar, rod, and wire produced by rolling, drawing, or cold finishing.

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1.2 Classification:

1.2.1 Tempers: Bar, rod, and wire are of the following tempers as specified (See 6.2 and 6.3): O, H12, H14, H16, H18, H112, or F temper. Definitions of these tempers are specified in AMS-QQ-A-225.

2. APPLICABLE DOCUMENTS:

See AMS-QQ-A-225.

3. REQUIREMENTS:

3.1 Chemical Composition:

3.1.1 The chemical composition shall conform to the requirements specified in Table I.

TABLE I. Chemical Composition 1/

Element	Percent	
	Minimum	Maximum
Manganese	1.0	1.5
Copper	0.05	0.20
Iron	-	0.7
Silicon	-	0.6
Zinc	-	0.10
Other Elements, each	-	0.05
Other Elements, total	-	0.15
Aluminum	Remainder	

1/ Analysis shall routinely be made only for the elements specifically mentioned in Table I. If, however, the presence of other elements is indicated or suspected in the course of routine analysis, further analysis shall be made to determine conformance to the limits specified for other elements.

3.2 Mechanical Properties:

3.2.1 Mechanical Properties of Materials as Supplied: The mechanical properties in the direction of working shall conform to the requirements of Table II, for the temper specified.

TABLE II. Mechanical Properties (See 6.5)

Temper	Diameter or Thickness Inches	Tensile Strength minimum ksi	Elongation in 2 in. or 4 times dia. 1/ minimum Percent
O	All sizes	2/19.0	25
H12	Up to 0.374, incl	17.0	--
H14	Up to 0.374, incl	20.0	--
H16	Up to 0.374, incl	24.0	--
H18	Up to 0.374, incl	27.0	--
H112	All sizes	14.0	--
F	0.375 and over	3/	3/

1/ The measurement of elongation is not required for wire less than 0.125 inch in diameter or thickness.
2/ Maximum.
3/ Mechanical properties do not apply for the F temper.

3.2.2 Bending: When specified, (See 6.2), the material shall withstand, without cracking, the bend test specified in AMS-QQ-A-225. The values for bend factor N are given in Table III.

TABLE III. Bend Test Factor "N"

Temper	N
O	0
H12	2
H14	2
H16	8
H18	-