SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

AMS-QQ-A-250/1A

Issued AUG 1997
Cancelled APR 2007

Superseding AMS-QQ-A-250/1

Aluminum 1100, Plate and Sheet

(Composition similar to UNS A91100)

RATIONALE

AMS-QQ-A-250/1 has been cancelled and superseded because equivalent technical requirements are provided by ASTM B 209, Alloy 1100.

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specification has been declared "CANCELLED" by the Aerospace Materials Division, SAE, as of April, 2007, and has been superseded by ASTM B 209, Alloy 1100. The requirements of the latest issue of ASTM B 209, Alloy 1100 shall be fulfilled whenever reference is made to the cancelled AMS-QQ-A-250/1. 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will remain listed in the Numerical Section of the Index of Aerospace Material Specifications, noting that it has been superseded by ASTM B 209, Alloy 1100.

Cancelled specifications are available from SAE.

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Aluminum 1100, Plate and Sheet

A91100

NOTICE

This document has been taken directly from Federal Specification QQ-A-250/1F 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 1100 aluminum plate and sheet described herein shall consist of this document and the latest issue of AMS QQ-A-250.

1. SCOPE AND CLASSIFICATION:

1.1 Scope:

This specification covers the specific requirements for 1100 aluminum plate and sheet.

1.2 Classification:

1.2.1 Tempers: The plate and sheet are of the following tempers as specified (See 6.2): O, H12, H14, H16, H18, H22, H24, H26, H28, H112, or F temper. Definitions of these tempers are specified in AMS QQ-A-250.

1.2.1.1 Temper Substitutions: Material in either one of a pair of tempers (H12 and H22, H14 and H24, H16 and H26, or H18 and H28) may be supplied at the option of the producer or supplier, unless the supplying of one temper of the pair is expressly forbidden in procurement documents (See 6.2).

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2. APPLICABLE DOCUMENTS:

See AMS QQ-A-250.

3. REQUIREMENTS:

3.1 Chemical Composition:

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

TABLE I. Chemical Composition 1/

Element	Percent	
	Minimum	Maximum
Iron plus silicon	--	0.95
Copper	0.05	0.20
Manganese	--	0.05
Zinc	--	0.10
Other Elements, each	--	0.05
Other Elements, total 2/	--	0.15
Aluminum	99.00	--

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 amounts greater than the specified limits, further analysis shall be made to determine that these elements are not present in excess of specified limits.

2/ The sum of those "Other" metallic elements 0.010 percent or more each, expressed to the second decimal before determining the sum.

3.2 Mechanical Properties:

3.2.1 Mechanical Properties of Material as Supplied: The mechanical properties parallel to the direction of the final rolling shall conform to requirements specified in Table II for the temper specified.

TABLE II. Mechanical Properties (See 6.4)

Temper	Thickness Inches	Ultimate Tensile Strength, ksi Minimum	Ultimate Tensile Strength, ksi Maximum	Yield Strength at 0.2 percent Offset Minimum ksi 1/	Elongation 2 inches or 4 times D 2/, 3/ Minimum percent
O	0.006-0.019	11.0	15.5	3.5	15
	0.020-0.031	11.0	15.5	3.5	20
	0.032-0.050	11.0	15.5	3.5	25
	0.051-0.249	11.0	15.5	3.5	30
	0.250-3.000	11.0	15.5	3.5	28
H12	0.017-0.019	14.0	19.0	11.0	3
	0.020-0.031	14.0	19.0	11.0	4
	0.032-0.050	14.0	19.0	11.0	6
	0.051-0.113	14.0	19.0	11.0	8
	0.114-0.499	14.0	19.0	11.0	9
	0.500-2.000	14.0	19.0	11.0	12
H14	0.009-0.012	16.0	21.0	14.0	1
	0.013-0.019	16.0	21.0	14.0	2
	0.020-0.031	16.0	21.0	14.0	3
	0.032-0.050	16.0	21.0	14.0	4
	0.051-0.113	16.0	21.0	14.0	5
	0.114-0.499	16.0	21.0	14.0	6
	0.500-1.000	16.0	21.0	14.0	10
H16	0.006-0.019	19.0	24.0	17.0	1
	0.020-0.031	19.0	24.0	17.0	2
	0.032-0.050	19.0	24.0	17.0	3
	0.051-0.162	19.0	24.0	17.0	4
H18	0.006-0.019	22.0	--	--	1
and	0.020-0.031	22.0	--	--	2
H28	0.032-0.050	22.0	--	--	3
	0.051-0.128	22.0	--	--	4
H112	0.250-0.499	13.0	--	7.0	9
	0.500-2.000	12.0	--	5.0	14
	2.001-3.000	11.5	--	4.0	20
H22	0.017-0.019	14.0	--	--	3
	0.020-0.031	14.0	--	--	4
	0.032-0.050	14.0	--	--	6
	0.051-0.113	14.0	--	--	8
	0.114-0.499	14.0	--	--	9
	0.500-2.000	14.0	--	--	12
H24	0.009-0.012	16.0	--	--	1
	0.013-0.019	16.0	--	--	2
	0.020-0.031	16.0	--	--	3
	0.032-0.050	16.0	--	--	4
	0.051-0.113	16.0	--	--	5