



AEROSPACE MATERIAL SPECIFICATION

AMS-QQ-A-250/10

REV. C

Issued 1997-08
Noncurrent 2007-09
Cancelled 2012-03
Stabilized 2013-12

Superseding AMS-QQ-A-250/10B

Aluminum Alloy 5454, Plate and Sheet
(Composition similar to UNS A95454)

RATIONALE

AMSQQ-A-250/10C rescinds the previous cancellation and supersession, and at the same time stabilizes the document because it still has use in industry.

STABILIZED NOTICE

This document has been declared "Stabilized" by the AMS Committee D. This document will no longer be updated and may no longer represent standard industry practice. This document has never been technically reviewed by AMS Committee D. Users of this document should refer any certification issues (e.g. exceptions listed on the certification report) to the cognizant engineering organization for their disposition. CAUTION: In many cases the purchaser is not the cognizant engineering organization (i.e. purchaser may be a sub tier supplier).

AMS Committee D recommends that the following similar but not necessarily identical specification be used for future procurement. This listing does not constitute authority to substitute this specification for the "STABILIZED" specification.

ASTM B 209 Aluminum and Aluminum-Alloy Sheet and Plate— designating alloy 5454 and applicable temper

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NOTICE

This document has been taken directly from Federal Specification QQ-A-250/10E 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 5454 aluminum alloy 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 5454 aluminum alloy plate and sheet; the general requirements are covered in AMS-QQ-A-250.

1.2 Classification:

1.2.1 Tempers: The plate and sheet are classified in one of the following tempers as specified (See 6.2): O, H32, H34, or H112 temper. Definitions of these tempers are specified in AMS-QQ-A-250.

2. APPLICABLE DOCUMENTS:

See AMS-QQ-A-250.

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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
Magnesium	2.4	3.0
Manganese	0.50	1.0
Chromium	0.05	0.20
Iron	-	0.40
Silicon	-	0.25
Zinc	-	0.25
Titanium	-	0.20
Copper	-	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 amounts greater than the specified limits, further analysis shall be made to determine that these elements are not present in excess of specified limits.

3.2 Mechanical Properties:

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

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TABLE II. MECHANICAL PROPERTIES (SEE 6.4)

Temper	Thickness Inches	Tensile Strength		Yield Strength at 0.2 percent Offset minimum ksi	Elongation in 2 in. or 4 times D <u>1</u> / <u>2</u> , minimum Percent
		Minimum ksi	Maximum ksi		
O	0.020 thru 0.031	31.0	41.0	12.0	12
	0.032 thru 0.050	31.0	41.0	12.0	14
	0.051 thru 0.113	31.0	41.0	12.0	16
	0.114 thru 3.000	31.0	41.0	12.0	18
H32	0.020 thru 0.050	36.0	44.0	26.0	5
	0.051 thru 0.249	36.0	44.0	26.0	8
	0.250 thru 2.000	36.0	44.0	26.0	12
H34	0.020 thru 0.050	39.0	47.0	29.0	4
	0.051 thru 0.161	39.0	47.0	29.0	6
	0.162 thru 0.249	39.0	47.0	29.0	7
	0.250 thru 1.000	39.0	47.0	29.0	10
H112	0.250 thru 0.499	32.0	-	18.0	8
	0.500 thru 2.000	31.0	-	12.0	11
	2.001 thru 3.000	31.0	-	12.0	15

¹/ Not required for material 1/2 inch or less in width.

²/ D represents specimen diameter.

4. QUALITY ASSURANCE PROVISIONS:

See AMS-QQ-A-250.

5. PREPARATION FOR DELIVERY:

See AMS-QQ-A-250.

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