SAE Aerospace
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AEROSPACE MATERIAL SPECIFICATION

SAE AMS-QQ-A-250/8B

Issued AUG 1997
Revised SEP 1998
Noncurrent SEP 2007

Superseding AMS-QQ-A-250/8A

Aluminum Alloy 5052, Plate and Sheet

UNS A95052

RATIONALE

AMS-QQ-A-250/8A has been designated NonCurrent because new designs can be adequately addressed by other AMS and ASTM specifications.

NONCURRENT NOTICE

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of September, 2007. It is recommended, therefore, that this specification not be specified for new designs.

"NONCURRENT" refers to those specifications which have previously been widely used and which may be required for production or processing of existing designs in the future. The Aerospace Materials Division, however, does not recommend these specifications for future use in new designs. "NONCURRENT" specifications are available from SAE upon request.

Similar but not necessarily identical products are covered in the following specifications. However, this listing is provided for information only and does not constitute authority to substitute these specifications for the "NONCURRENT" specification.

AMS 4015, Aluminum Alloy, Sheet and Plate 2.5Mg - 0.25CR (5052-0) Annealed

AMS 4016, Aluminum Alloy, Sheet and Plate 2.5Mg - 0.25Cr (5052-H32) Strain Hardened, Quarter-Hard, and Stabilized

AMS 4017, Aluminum Alloy Sheet and Plate 2.5Mg - 0.25Cr (5052-H34) Strain- Hardened, Half-Hard, and Stabilized

ASTM B 209, Aluminum and Aluminum-Alloy Sheet and Plate - designating Alloy 5052 and applicable temper

NOTICE

This document has been taken directly from Federal Specification QQ-A-250/8F 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 5052 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 5052 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, H22, H24, H26, H28, H32, H34, H36, H38, H112, or F temper. Definitions of these tempers are specified in AMS-QQ-A-250.

1.2.1.1 Material in either of a pair of tempers (H32 and H22, H34 and H24, H36 and H26, or H38 and H28) may be supplied at the option of the supplier, unless one is specifically excluded in the contract or purchase order.

2. APPLICABLE DOCUMENTS:

See AMS-QQ-A-250.

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	2.2	2.8
Chromium	0.15	0.35
Iron	-	0.40
Silicon	-	0.25
Copper	-	0.10
Manganese	-	0.10
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 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 the final rolling shall conform to the requirements of Table II for the temper specified.

TABLE II. Mechanical Properties (See 6.4)

Temper	Thickness	Tensile Strength		Elongation in 2 in. or 4 times D 1/ 3/, minimum
		Min	Max	
	Inches	ksi	ksi	Percent
O	0.006 thru 0.007	25.0	31.0	-
	0.008 thru 0.012	25.0	31.0	14
	0.013 thru 0.019	25.0	31.0	15
	0.020 thru 0.031	25.0	31.0	16
	0.032 thru 0.050	25.0	31.0	18
	0.051 thru 0.113	25.0	31.0	19
	0.114 thru 0.249	25.0	31.0	20
	0.250 thru 3.000	25.0	31.0	18
H22 or H32 2/	0.017 thru 0.019	31.0	38.0	4
	0.020 thru 0.050	31.0	38.0	5
	0.051 thru 0.113	31.0	38.0	7
	0.114 thru 0.249	31.0	38.0	9
	0.250 thru 0.499	31.0	38.0	11
	0.500 thru 2.000	31.0	38.0	12
H24 or H34 2/	0.009 thru 0.019	34.0	41.0	3
	0.020 thru 0.050	34.0	41.0	4
	0.051 thru 0.113	34.0	41.0	6
	0.114 thru 0.249	34.0	41.0	7
	0.250 thru 1.000	34.0	41.0	10
H26 or H36 2/	0.006 thru 0.007	37.0	44.0	2
	0.008 thru 0.031	37.0	44.0	3
	0.032 thru 0.162	37.0	44.0	4
H28 or H38	0.006 thru 0.007	39.0	-	2
	0.008 thru 0.031	39.0	-	3
	0.032 thru 0.128	39.0	-	4
H112	0.250 thru 0.499	28.0	-	7
	0.500 thru 2.000	25.0	-	12
	2.001 thru 3.000	25.0	-	16
F	All	4/	4/	4/

1/ Not required for material 1/2 inch or less in width.
2/ For the H2 temper series, the maximum tensile values do not apply.
3/ D represents specimen diameter.
4/ No requirement.