

TITANIUM ALLOY SHEET AND STRIP
4Al - 3Mo - 1V
Solution Heat Treated

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-7-75. It is recommended that this specification not be specified for new designs.

This cover sheet should be attached to the "A" revision of the subject specification.

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AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
TWO PENNSYLVANIA PLAZA, NEW YORK, N.Y. 1000

AMS 4912A

Superseding AMS 4912

Issued	1-15-61
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1. ACKNOWLEDGMENT: A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for parts to be formed in the solution heat treated condition and subsequently precipitation hardened. Material may be characterized by poor crack propagation resistance in the precipitation treated condition.
3. COMPOSITION:

	min	max
Aluminum	3.75	4.75
Molybdenum	2.50	3.50
Vanadium	0.75	1.25
Iron	--	0.35
Oxygen	--	0.20
Carbon	--	0.08
Nitrogen	--	0.05 (500 ppm)
Hydrogen	--	0.015 (150 ppm)
Other Elements, each (1)	--	0.10
Other Elements, total (1)	--	0.40
Titanium	remainder	

(1) Determination not required for routine acceptance.

- 3.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2249.
4. CONDITION: Unless otherwise specified, hot rolled with or without subsequent cold reduction, solution heat treated, descaled, and leveled, having a surface appearance comparable to a commercial corrosion resistant steel No. 2D finish.
5. TECHNICAL REQUIREMENTS:
 - 5.1 Solution Heat Treatment: Unless otherwise specified, material shall be solution heat treated by heating to $1640\text{ F} \pm 15$ ($893.3\text{ C} \pm 8.3$), holding at heat for a time commensurate with the thickness and the heating equipment and procedure used, but not longer than 30 min., and then quenching in oil or water at room temperature.
 - 5.2 Tensile Properties: These properties apply when the rate of strain is maintained at 0.003 - 0.007 in. per in. per min. through the yield strength and then is increased so as to produce failure in approximately one additional minute. When a dispute occurs between purchaser and vendor over the yield strength values, a referee test shall be performed on a machine having a strain rate pacer, using a rate of 0.005 in. per in. per min. through the yield strength and a minimum cross head speed of 0.10 in. per min. above the yield strength; for such referee tests, yield strength shall be determined by the offset method.

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