

TITANIUM ALLOY SHEET AND STRIP
4Al - 3Mo - 1V
Solution and Precipitation 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.

REAFFIRMED**Documents**

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AEROSPACE MATERIAL SPECIFICATION

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

AMS 4913A
Superseding AMS 4913

Issued 1-15-61
Revised 11-1-68

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

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 requiring strength up to 600 F (316 C). This material may be characterized by poor crack propagation resistance.
3. **COMPOSITION:**

	min	max
Ø 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 ordered, hot rolled with or without subsequent cold reduction, solution heat treated, descaled, leveled, precipitation heat treated, and descaled, having a surface appearance comparable to a commercial corrosion resistant steel No. 2D finish.
5. **TECHNICAL REQUIREMENTS:**
 - 5.1 **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 quenching in oil or water at room temperature, and then shall be precipitation heat treated by heating to $925\text{ F} \pm 15$ ($496.1\text{ C} \pm 8.3$), holding at heat for 10 - 14 hr, and cooling.
 - 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 value, 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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