

AEROSPACE MATERIAL SPECIFICATIONS

AMS 4955

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

485 Lexington Ave., New York, N.Y. 10017

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Revised

TITANIUM ALLOY WELDING WIRE 8Al - 1Mo - 1V

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for inert gas arc welding.
3. **COMPOSITION:** The product shall conform to the following:

	min	max
Aluminum	7.35	8.35
Molybdenum	0.75	1.25
Vanadium	0.75	1.25
Iron	--	0.30
Oxygen	--	0.12
Carbon	--	0.08
Nitrogen	--	0.05 (500 ppm)
Hydrogen	--	0.010 (100 ppm)
Other Elements, each (1)	--	0.10
Other Elements, total (1)	--	0.40
Titanium		remainder

(1) Need not be reported.

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2249.
4. **CONDITION:** Unless otherwise specified, wire shall be single annealed, descaled, and cleaned free of surface contamination. Wire shall be furnished on disposable spools for machine welding and in cut lengths for manual welding, as ordered.
5. **TECHNICAL REQUIREMENTS:**
 - 5.1 **Welding:** Melted wire shall flow smoothly and evenly during welding and shall be capable of producing acceptable welds.
 - 5.2 **Spooled Wire:** Shall conform to the following unless otherwise agreed upon by purchaser and vendor:
 - 5.2.1 **Cast:** Wire shall have imparted to it a curvature such that a specimen 10 - 12 ft in length, when cut from the spool and suspended freely from its approximate midlength, shall form a circle not less than 20 in. and not greater than 36 in. in diameter (See Fig. 1). If the curvature of the wire results in a coil of more than 1-1/2 turns, the excess shall be clipped off and the wire resuspended from its new approximate midlength.
 - 5.2.2 **Helix:** A specimen cut and suspended as in 5.2.1 and measured between adjacent turns shall show a separation not greater than 4 in. (See Fig. 1).
 - 5.2.3 **Layer Winding:** Wire shall be closely wound in layers but adjacent turns within a layer need not necessarily be touching; shall be wound so as to avoid producing kinks, waves, and sharp bends; and shall be free to unwind without restriction caused by overlapping or wedging. The outside end of the spooled wire shall be so treated that it may be readily located.