



AEROSPACE MATERIAL SPECIFICATION

AMS6473**REV. B**

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Superseding AMS6473A

Steel Welding Wire
0.88Cr - 1.8Ni - 1.6Co - 0.42Mo - 0.08V (0.28 - 0.33C) (SAE 4330V)
Vacuum Melted, Environment Controlled Packaging

RATIONALE

AMS6473B places this specification in cancelled status.

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Documents

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1. SCOPE:

1.1 Form:

This specification covers a low-alloy steel in the form of welding wire.

1.2 Application:

Primarily for use as filler metal for gas-metal-arc or gas-tungsten-arc welding of steels of similar composition.

2. APPLICABLE DOCUMENTS:

The following publications form a part of this specification to the extent specified herein. The latest issue of SAE publications shall apply. The applicable issue of other publications shall be the issue in effect on the date of the purchase order.

2.1 SAE Publications:

Available from SAE, 400 Commonwealth Drive, Warrendale, PA 15096-0001.

2.1.1 Aerospace Material Specifications:

AMS 2259	Chemical Check Analysis Limits, Wrought Low-Alloy and Carbon Steels
AMS 2370	Quality Assurance Sampling of Carbon and Low-Alloy Steels, Wrought Products Except Forgings and Forging Stock
AMS 2813	Packaging of Welding Wire, Standard Method
AMS 2814	Packaging of Welding Wire, Premium Quality
AMS 2815	Identification, Welding Wire, Line Code System
AMS 2816	Identification, Welding Wire, Color Code System

2.1.2 Aerospace Recommended Practices:

ARP1876 Weldability Test for Weld Filler Metal Wire

2.2 ASTM Publications:

Available from ASTM, 1916 Race Street, Philadelphia, PA 19103-1187.

ASTM E 350 Chemical Analysis of Carbon Steel, Low-Alloy Steel, Silicon Electrical Steel, Ingot Iron, and Wrought Iron

3. TECHNICAL REQUIREMENTS:

3.1 Composition:

Shall conform to the following percentages by weight, determined by wet chemical methods in accordance with ASTM E 350, by spectrochemical methods, or by other analytical methods acceptable to purchaser:

	min	max
Carbon	0.28	0.33
Manganese	0.65	1.00
Silicon	0.15	0.35
Phosphorus	--	0.010
Sulfur	--	0.008
Chromium	0.75	1.00
Nickel	1.65	2.00
Cobalt	1.30	2.00
Molybdenum	0.35	0.50
Vanadium	0.05	0.10
Oxygen (3.1.2)	--	0.005 (50 ppm)
Nitrogen (3.1.2)	--	0.040 (400 ppm)
Hydrogen (3.1.2)	--	0.001 (10 ppm)

3.1.1 Check Analysis: Composition variations shall meet the applicable requirements of AMS 2259. No variation over maximum is permitted for oxygen, nitrogen, and hydrogen.

3.1.2 Shall be determined on finished wire.

3.2 Condition:

Cold worked, bright finished, in a temper and with a surface finish which will provide proper feeding of the wire in machine welding equipment.

3.2.1 Wire shall be furnished on disposable spools for machine welding or in cut lengths for manual welding, as ordered.

3.2.2 In-process annealing between cold rolling or drawing operations shall be performed in a suitable protective atmosphere.

3.2.3 Drawing compounds, oxides, dirt, and other foreign materials shall be removed by cleaning processes which will neither result in pitting nor cause gas absorption by the wire or deposition of substances harmful to welding operations.