



AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

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

AMS 5501

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Revised

STEEL FOIL, CORROSION RESISTANT

19Cr - 9Ni (SAE 30304)

Cold Rolled, 125,000 psi

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. **APPLICATION:** Primarily for liners of filament wound pressure vessels.
3. **COMPOSITION:**

	min	max
Carbon	--	0.08
Manganese	--	2.00
Silicon	--	1.00
Phosphorous	--	0.040
Sulphur	--	0.030
Chromium	18.00 - 20.00	
Nickel	8.00 - 11.00	
Molybdenum	--	0.50
Copper	--	0.50

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2248.

4. **CONDITION:** Cold rolled, solution heat treated, descaled, and rerolled (No. 2 Strip Finish).

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Tensile Properties:**

Tensile Strength, psi	125,000 min
Yield Strength at 0.2% Offset or at 0.0098 in.	
in 2 in. Extension Under Load (E = 26,000,000), psi	75,000 min
Elongation, % in 2 in.	15 min

- 5.1.1 For widths 9 in. and over, tensile test specimens shall be taken with the axis perpendicular to the direction of rolling. For widths less than 9 in., tensile test specimens shall be taken with the axis parallel to the direction of rolling.

- 5.2 **Bending:** Material tested with specimens 0.750 in. in width shall withstand, without cracking, bending at room temperature through the angle indicated below around a diameter equal to the bend factor times the nominal thickness of the material, with axis of bend parallel to the direction of rolling; only one bend test need be performed.

Nominal Thickness Inch	Type of Bend	Angle deg, min	Bend Factor
Up to 0.010, incl	Free Bend	180	1
Up to 0.010, incl	V-Block	135	2