



AEROSPACE MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

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

AMS 5553A

Superseding AMS 5553

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NICKEL SHEET AND STRIP Low (0.02 max) Carbon Annealed

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 excellent corrosion resistance and/or strong magnetic properties.
3. **COMPOSITION:**

	min	max
Carbon		0.02
Manganese	--	0.35
Silicon	--	0.35
Sulfur	--	0.010
Iron	--	0.40
Copper	--	0.25
Nickel + Cobalt	99.0	--

- 3.1 **Check Analysis:** Composition variations shall meet the requirements of the latest issue of AMS 2269.

4. **CONDITION:** Unless otherwise specified, hot or cold rolled and annealed, and descaled if necessary, having a surface appearance as close as possible to a commercial corrosion resistant steel No. 2D finish; standards for acceptance shall be as agreed upon by purchaser and vendor.

- 4.1 Unless otherwise permitted, annealing shall be accomplished in a reducing atmosphere which is substantially sulfur-free.

5. **TECHNICAL REQUIREMENTS:**

- 5.1 **Tensile Properties:** The following requirements apply to material 0.005 in. and over in thickness:

Nominal Thickness Inch	Tensile Strength psi, min	Yield Strength at 0.2% Offset or at Extension Indicated (E = 30,000,000)		Elongation % in 2 in. min
		psi	in. in 2 in.	
0.005 to 0.010, excl	45,000	--	--	--
0.010 to 0.015, incl	50,000	30,000 max	0.0060	35
Over 0.015 to 0.025, incl	50,000	12,000 min	0.0048	35
Over 0.025	50,000	12,000 min	0.0048	40

- 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 **Hardness:** Material should have hardness not higher than Rockwell B 66 or equivalent but shall not be rejected on the basis of hardness if the tensile property requirements are met.