

AEROSPACE MATERIAL SPECIFICATIONS

AMS 5553

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc.

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

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Revised

NICKEL SHEET AND STRIP Low (0.02 max) Carbon Annealed

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number 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:**

Tensile Strength, psi	50,000 min
Yield Strength at 0.2% Offset, psi	30,000 max
Elongation, % in 2 in.	40 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 **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.
6. **QUALITY:** The product shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external imperfections detrimental to fabrication or to performance of parts.
7. **TOLERANCES:** Unless otherwise specified, tolerances shall conform to all applicable requirements of the latest issue of AMS 2262.

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