AEROSPACE
MATERIAL SPECIFICATIONS

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York, N.Y. 10017

AMS 5553A
Superseding AMS 5553
Issued 2-15-65
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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) psi | Extension Under Load in. in 2 in. | Elongation % in 2 in. min |
|---|---|---|---|---|
| 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.