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**AERONAUTICAL MATERIAL SPECIFICATION**

Society of Automotive Engineers, Inc.
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AMS
5540

# SHEET AND STRIP, CORROSION RESISTANT NICKEL CHROMIUM IRON ALLOY

1. ACKNOWLEDGMENT: A vendor must mention this specification number and its last revision in all quotations and when acknowledging purchase orders.

2. COMPOSITION:

| | |
|---|---|
| Carbon | 0.15 max |
| Manganese | 1.00 max |
| Silicon | 0.50 max |
| Chromium | 12.00 - 15.00 |
| Nickel | 75.00 min |
| Iron | 9.00 max |

3. CONDITION: (a)Test pieces cut in any direction from this material shall conform to the following requirements:

| | |
|---|---|
| Tensile Strength, lb per sq in. | 100,000 max |
| Yield Strength, lb per sq in. | 45,000 max |
| Elongation, % in 2 in. | 35 min |
| Rockwell | B 76 - 88 or equivalent |

Yield Strength and Elongation not required for sheet or strip under 0.020" in thickness.

(b)Test specimens shall withstand cold bending 180° over a diameter equal to the thickness, in any direction of the sheet, without cracking.

4. QUALITY: (a)This material must be uniform quality, fine grain, free from surface or internal defects and must not develop material defects during fabrication.

(b)All sheets and strips shall be straight, flat, clean, and smooth, free from seams, laminations, blisters, and other defects and shall have a good workmanlike finish.

5. TOLERANCE: The following variations in thickness are permissible. All dimensions are in inches:

| Ordered Thickness | Tolerance, plus or minus |
|---|---|
| Up to 0.034 | 0.002 |
| Over 0.034 to 0.062, incl. | 0.003 |
| Over 0.062 to 0.125, " | 0.004 |
| Over 0.125 to 0.187, " | 0.005 |
| Over 0.187 to 0.218, " | 0.006 |
| Over 0.218 to 0.234, " | 0.007 |
| Over 0.234 | 0.008 |