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# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.

29 West 39th Street

New York City

AMS

5516

## STEEL SHEET AND STRIP, CORROSION RESISTANT 18 Chromium - 8 Nickel (Cold Rolled)

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

Carbon	0.12 max
Manganese	2.00 max
Silicon	0.75 max
Phosphorus	0.03 max
Sulphur	0.03 max
Chromium	17.00 min
Nickel	7.00 min
3. **CONDITION:** (a) Annealed, pickled and cold rolled.  
 (b) Test specimens cut in any direction shall conform to the following:
 

Tensile Strength, lb per sq in.	100,000 max
Elongation, % in 2 in.	40 min
Rockwell Hardness	B 85 max

 (c) Test specimens shall withstand cold bending in any direction of the sheet, without cracking, through an angle of 180° over a diameter equal to the thickness.
4. **QUALITY:** (a) This material must be uniform in quality, fine grain, free from surface or internal defects and must not reveal material defects during fabrication.  
 (b) All sheets or 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:

<u>Ordered Thickness</u>	<u>Tolerance, plus or minus</u>
0.100 or over	0.004
0.099 to 0.030	0.003
0.029 to 0.020	0.002
0.019 to 0.015	0.0015
0.014 to 0.010	0.001
0.009 to 0.006	0.00075

6. **REPORTS:** The manufacturer shall furnish three copies of a certified report of the chemical composition on each size of each shipment. This report shall include the purchase order number, material specification number, size, quantity and part number if parts are supplied.