

# AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.  
29 West 39th Street  
New York City

## AMS 5515

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Revised

### STEEL SHEET AND STRIP, CORROSION RESISTANT Deep Forming Quality 18 Chromium - 8 Nickel

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

2. COMPOSITION:

Carbon	0.15 max
Manganese	0.20 to 2.50
Silicon	0.75 max
Phosphorous	0.03 max
Sulphur	0.03 max
Copper	0.50 max
Chromium	17.00 min
Nickel	7.00 min

3. CONDITION: (a) Hot rolled, solution heat-treated, and pickled (No. 1 Finish)

(b) Tensile test specimens shall be pulled at a rate of 0.05 inch per inch per minute and shall conform to the following requirements:

Tensile Strength, lbs./sq.in.	120,000 max
Elongation % in 2 inches	
Thicknesses up to .025 inch	50 min
Thicknesses .025 and up	55 min

For widths 9 inches or over, tensile test specimens shall be taken with the axis perpendicular to the direction of rolling. For widths less than 9 inches, tensile test specimens shall be taken with the axis parallel to the direction of rolling.

(c) Bend 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 of the specimen.

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

(b) All sheets or strips shall be commercially straight, smooth and free from grease or other foreign matter.

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

<u>Nominal Thickness</u>	<u>THICKNESS TOLERANCES</u>		
		<u>Tolerances</u>	
inch	Sheets 14 inches wide, and less inch	Sheets over 14 inches wide inch	
0.018 and less	+0.001	-0.002	+0.002
Over 0.018 to 0.028 incl.	+ .002	- .003	+ .003