

AERONAUTICAL MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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New York City

AMS 5517

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Revised

STEEL SHEET AND STRIP, CORROSION RESISTANT Cold Rolled High Ductility Type 18 Chromium - 8 Nickel (125,000 T.S.)

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	7.0 min

3. CONDITION: (a) Hot rolled, solution heat treated, pickled and cold rolled (No. 2B finish)

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

Tensile Strength, lbs/sq.in.	125,000 - 150,000
Yield Strength, lbs/sq.in.	75,000 min
Extension Under Load, Inch in 2 inches	0.0098
Elongation, % in 2 inches	25 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 bending in any direction through an angle indicated in the following table on a diameter equal to "N" times the least thickness of the specimen, without cracking.

<u>Thickness, Inch</u>	<u>Angle, Deg.</u>	<u>Bend Factor "N"</u>
Up to 0.050	180	1
0.051 and over	90	2

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 free from grease or other foreign matter, and shall have a workmanlike finish.