

# AERONAUTICAL MATERIAL SPECIFICATION

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

## AMS 5519E

Issued 1-23-40  
Revised 2-15-52

STEEL SHEET AND STRIP, CORROSION RESISTANT  
18Cr - 8Ni  
Cold Rolled - 185,000 psi

1. ACKNOWLEDGMENT: A vendor shall mention this specification and its revision letter in all quotations and when acknowledging purchase orders.
2. APPLICATION: Primarily for applications requiring moderate forming and bending.
3. COMPOSITION:

Check Analysis  
Under Min or Over Max

Carbon	0.15 max	--	0.01
Manganese	2.00 max	--	0.04
Silicon	1.00 max	--	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	17.00 min	0.20	--
Nickel	7.00 min	0.10	--
Molybdenum	0.50 max	--	0.03
Copper	0.50 max	--	0.03

4. CONDITION:

- 4.1 Sheet: Solution heat treated, descaled and cold rolled (No. 2B Finish).
- 4.2 Strip: Cold rolled, solution heat treated, descaled and rerolled (No. 2 Strip Finish).

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	185,000 min
Yield Strength at 0.2% Offset or at 0.0148 in. in 2 in. Extension Under Load, (E=26,000,000)psi	140,000 min
Elongation, % in 2 in.	
Thickness: 0.015 in. and under	8 min
Over 0.015 in.	9 min

- 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.

Section 7C of the SAE Technical Board rules provides that: "All technical reports, including standards approved and practices recommended, are advisory only. Their use by anyone engaged in industry or trade is entirely voluntary. There is no agreement to adhere to any SAE standard or recommended practice, and no commitment to conform to or be guided by any technical report, in formulating and approving technical reports. The Board and its committees do not investigate or consider patents which may apply to the subject matter. Prospective users of the report are responsible for protecting themselves against liability for infringement of patents."