

AERONAUTICAL MATERIAL SPECIFICATION

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STEEL SHEET AND STRIP, CORROSION AND HEAT RESISTANT 23Cr - 13.5Ni (309S)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Sheet, strip, and plate.
3. APPLICATION: Parts and assemblies requiring both corrosion and heat resistance, and where such parts may require welding during fabrication. Parts and assemblies requiring oxidation resistance up to approximately 2000 F, but useful at the higher temperatures only when stresses are very low. Strength at elevated temperatures is similar to that of the 18-8 types.

4. COMPOSITION:

Check Analysis			
Under Min or Over Max			
Carbon	0.08 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	22.00 - 24.00	0.25	0.25
Nickel	12.00 - 15.00	0.15	0.15
Molybdenum	0.50 max	--	0.03
Copper	0.50 max	--	0.03

5. CONDITION:

- 5.1 Sheet: Cold rolled, solution heat treated free from continuous carbide network, and descaled (2D Finish).
- 5.2 Strip: Cold rolled, solution heat treated free from continuous carbide network, and descaled (No. 1 Strip Finish).
- 5.3 Plate: Hot rolled, solution heat treated free from continuous carbide network, and descaled.

6. TECHNICAL REQUIREMENTS:

6.1 Tensile Properties:

Tensile Strength, psi	100,000 max
Elongation, % in 2 in.	40 min

- 6.2 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.

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