

**AEROSPACE
MATERIAL
SPECIFICATION**

AMS 5527A

Issued 10-1-50
Revised 10-1-82

UNS K63198
STEEL SHEET, STRIP, AND PLATE, CORROSION AND HEAT RESISTANT
20Cr - 9Ni - 1.4Mo - 1.4W - 0.4(Cb + Ta) - 0.2Ti
Hot Rolled and Stress Relieved

This specification has been declared "NONCURRENT" by the Aerospace Materials Division, SAE, as of 10-1-82. It is recommended, therefore, that this specification not be specified for new designs.

This cover sheet should be attached to the "A" revision of the subject specification.

This specification is under the jurisdiction of AMS Committee "F".

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AERONAUTICAL MATERIAL SPECIFICATION

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

AMS 5527A

Issued 10-1-50

Revised 11-1-54

STEEL SHEET AND STRIP, CORROSION AND HEAT RESISTANT
20Cr - 9Ni - 1.4Mo - 1.4W - 0.4(Cb+Ta) - 0.2Ti
Hot Rolled and Stress Relieved

1. **ACKNOWLEDGMENT:** A vendor shall mention this specification number and its revision letter in all quotations and when acknowledging purchase orders.
2. **FORM:** Sheet, strip, and plate.
3. **APPLICATION:** Primarily for parts and assemblies such as tank shells, doublers, bulkhead rings, tail pipes, and exhaust cones, requiring high strength up to 1000 F and oxidation resistance up to 1600 F.
4. **COMPOSITION:**

Check Analysis
Under Min or Over Max

Carbon	0.28 - 0.35	0.02	0.02
Manganese	0.75 - 1.50	0.04	0.04
Silicon	0.30 - 0.80	0.05	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	18.00 - 21.00	0.25	0.25
Nickel	8.00 - 11.00	0.15	0.15
Molybdenum	1.00 - 1.75	0.05	0.05
Tungsten	1.00 - 1.75	0.05	0.05
Columbium + Tantalum	0.25 - 0.60	0.05	0.05
Titanium	0.10 - 0.35	0.00	0.05
Copper	0.50 max	--	0.03

5. **CONDITION:**

- 5.1 **Sheet:** Hot rolled or cold finished, stress relieved, and descaled having a surface appearance as close as possible to a commercial corrosion resistant steel No. 2D finish; actual acceptance and rejection standards shall be as agreed upon by purchaser and vendor.
- 5.2 **Strip:** Cold finished, stress relieved, and descaled (No. 1 Strip Finish).
- 5.3 **Plate:** Hot rolled, stress relieved, and descaled.

6. **TECHNICAL REQUIREMENTS:**

- 6.1 **Stress Relief Heat Treatment:** Material shall be heated to 1200 F $\pm$ 25 and air cooled.

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 obligation 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 will 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."