

AEROSPACE

MATERIAL SPECIFICATIONS

AMS 5593

SOCIETY OF AUTOMOTIVE ENGINEERS, Inc. 485 Lexington Ave., New York 17, N.Y.

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Revised

ALLOY SHEET, STRIP, AND PLATE, HEAT RESISTANT
Iron Base - 25Cr - 45Ni - 3.2Co - 3.2Mo - 3.2W

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

2. APPLICATION: Primarily for parts and assemblies requiring heat and oxidation resistance and where such parts may require welding during fabrication. Oxidation resistant up to 2150 F (1175 C).

3. COMPOSITION:

Carbon	0.08	max
Manganese	2.00	max
Silicon	0.75 - 1.50	
Phosphorus	0.030	max
Sulphur	0.030	max
Chromium	24.00 - 27.00	
Nickel	44.00 - 47.00	
Cobalt	2.50 - 4.00	
Molybdenum	2.50 - 4.00	
Tungsten	2.50 - 4.00	
Copper	0.50	max
Tin	0.025	max
Lead	0.025	max
Iron		remainder

3.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2248.

4. CONDITION:

4.1 Sheet 0.050 In. and Over Thick: Hot rolled, solution heat treated free from continuous carbide network, and descaled.

4.2 Sheet Under 0.050 In. Thick and Strip: Cold rolled, solution heat treated free from continuous carbide network, and descaled.

4.3 Plate: Hot rolled, solution heat treated free from continuous carbide network, and descaled.

5. TECHNICAL REQUIREMENTS:

5.1 Tensile Properties:

Tensile Strength, psi	110,000	max
Elongation, % in 2 in.		30 min

5.1.1 Elongation requirement does not apply to sheet or strip under 0.020 in. in thickness.

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