



AEROSPACE MATERIAL SPECIFICATION

Society of Automotive Engineers, Inc.
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AMS 5740

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Revised

STEEL BARS, FORGINGS, AND RINGS, CORROSION AND MODERATE HEAT RESISTANT
14.5Cr - 6.5Ni - 0.72Ti
Solution Treated and Maraged (155,000 psi)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Bars, forgings, flash welded rings, and stock for forgings or flash welded rings.
3. APPLICATION: Primarily for parts requiring corrosion resistance and high strength at temperatures up to 600 F (316 C).
4. COMPOSITION:

	min	max
Carbon	--	0.05
Manganese	--	0.50
Silicon	--	0.30
Phosphorus	--	0.03
Sulfur	--	0.03
Chromium	14.00 - 15.00	
Nickel	6.00 - 7.00	
Titanium	0.55 - 0.90	

- 4.1 Check Analysis: Composition variations shall meet the requirements of the latest issue of AMS 2248.
5. CONDITION: Unless otherwise ordered, the product shall be supplied in the following condition:
 - 5.1 Bars, Forgings, and Flash Welded Rings: Solution heat treated and maraged as in 6.1.
 - 5.1.1 Rounds: Hot finished, solution heat treated, maraged, and centerless ground.
 - 5.1.2 Squares, Flats, and Hexagons: Solution heat treated, maraged, and cold drawn.
 - 5.1.3 Flash welded rings shall not be supplied unless specified or permitted on purchaser's part drawing. When supplied, they shall be manufactured in accordance with the latest issue of AMS 7490; unless otherwise specified.
 - 5.2 Stock for Forgings and Flash Welded Rings: As ordered by the forging or flash welded ring manufacturer.
6. TECHNICAL REQUIREMENTS:
 - 6.1 Heat Treatment: Unless otherwise specified, the product shall be solution heat treated by heating to 1500 F $\pm$ 25 (815.6 C $\pm$ 14), holding at heat for 1 hr, and cooling as required, and then maraged by heating to 1000 F $\pm$ 25 (537.8 C $\pm$ 14), holding at heat for 2 hr, and cooling in air.