

AERONAUTICAL MATERIAL SPECIFICATION

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Revised

STEEL, CORROSION AND MODERATE HEAT RESISTANT 17Cr (SAE 51430)

1. ACKNOWLEDGMENT: A vendor shall mention this specification number in all quotations and when acknowledging purchase orders.
2. FORM: Bars, forgings, forging stock, and mechanical tubing.
3. APPLICATION: Primarily for parts and assemblies, such as turbine air seals, requiring oxidation resistance but not high strength at temperatures up to approximately 1600 F.
4. COMPOSITION:

Check Analysis Under Min or Over Max

Carbon	0.12 max	--	0.01
Manganese	1.00 max	--	0.03
Silicon	1.00 max	--	0.05
Phosphorus	0.040 max	--	0.005
Sulfur	0.030 max	--	0.005
Chromium	16.00 - 18.00	0.20	0.20
Nickel	0.75 max	--	0.03
Molybdenum	0.50 max	--	0.03
Copper	0.50 max	--	0.03

5. CONDITION:

5.1 Bars, Forgings and Mechanical Tubing: Annealed.

5.1.1 Unless otherwise specified, all hexagons, and other bars 2.75 in. and less in diameter or distance between parallel sides shall be cold finished.

5.2 Forging Stock: As ordered by the forging manufacturer.

6. TECHNICAL REQUIREMENTS:

6.1 Hardness:

6.1.1 Bars and Mechanical Tubing: Shall have hardness not higher than Brinell 202 or equivalent.

6.1.2 Forgings: Shall have hardness not higher than Brinell 183 or equivalent.

6.2 Grain Size: Shall be not larger than ASTM No. 0.

7. QUALITY: Material shall be uniform in quality and condition, clean, sound, and free from foreign materials and from internal and external defects detrimental to fabrication or to performance of parts.

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