

330 Stainless Steel Material Grade

Principal Design Features: 330 is an austenitic, nickel-chromium-iron-silicon alloy. It combines excellent resistance to carburization and oxidation at temperatures up to 2200 F(1200 C) with high strength.

Applications: Extensively used in high temperature environments where resistance to the combine effects of thermal cycling and carburization is necessary. Used in a variety of furnace components as well as in gas turbines, heat exchangers, general heat treating equipment and neutral and cyanide salt pots.

Machinability: With proper practices this alloy can be satisfactorily machined. Slow speeds, positive feeds, sulphurized lubricants and rigid mounts are generally recommended.

Welding: Can be successfully welded using GAW techniques. Use either 330 or Inco 800 filler materials.

330 Chemistry Data

Carbon	0.08 max
Chromium	17 - 20
Copper	1 max
Iron	Balance
Lead	0.005 max
Manganese	2 max
Nickel	34 - 37
Phosphorus	0.03 max
Silicon	0.75 - 1.5
Sulphur	0.03 max
Tin	0.025 max

330 Physical Data

Density (lb / cu. in.)	0.289
Specific Gravity	7.99
Specific Heat (Btu/lb/Deg F - [32-212 Deg F])	0.11
Magnetic Permeability	1.02
Modulus of Elasticity Tension	28.5

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