



330

Description

The high alloy content of this grade imparts excellent resistance to oxidation, carburizing and thermal shock. It is especially suited to high temperature applications

Typical Applications

- Furnace parts
- Carburizing boxes
- Nitriding fixtures
- Heater tubing

Corrosion Resistance

Very good resistance to a wide range of environments especially at elevated temperatures.

Heat Resistance

Excellent resistance to oxidation at temperatures up to 2100°F in the absence of sulphur bearing components. Very resistant to carburizing atmospheres. Very good resistance to thermal shock.

Heat Treatment

Annealing - heat to 1950-2150 °F and cool rapidly for maximum corrosion resistance. This grade cannot be hardened by heat treatment.

Welding

Good characteristics suited to all standard methods. Use Type 330 or 310 electrodes. Post-weld heat treatment not normally necessary because this steel is generally used at elevated temperatures.

Chemical Analysis		C	Mn	P	S	Si	Cr	Ni
Max values	330	.08	2.0	.040	.030	.75-1.50	17.0-20.0	34.0-37.0

Typical Mechanical Properties- Annealed	Yield Strength	Tensile Strength	Elongation	Hardness		Impact Charpy	Modulus of Elasticity in Tension - ksi
	ksi	ksi	% in 2"	R b	BHN		
	42	85	45	80	146	240	28500

Other Properties	Creep Strength 1% flow 10,000 hours at 1000°F -ksi	Magnetic Permeability at 200H- Annealed	Electrical Resistivity - Microhm -Cm At 68°F	Coefficient of Thermal expansion: (ln/ln°F x 10 ⁻⁶) 32°- 212°F	Thermal Conductivity BTU/ft. ² /Hr./°F/ft.	
		1.01	102	9.3	At 212°F	At 932°F
					7.2	12.1