

N-60 is known for its excellent galling resistance, even at elevated temperatures. The additions of 4% silicon and 8% manganese inhibit wear, galling, and fretting. It is commonly used for various fasteners and pins that require strength and resistance to galling. It maintains decent strength up to temperatures of 1800°F and has oxidation resistance similar to that of 309 stainless steel. The general corrosion resistance is between that of 304 and 316 stainless steel.

Chemistry

	Ni	Cr	Mn	Si	C	N	S	P	Fe
Min	8.0	16.0	7.0	3.5	-	0.08	-	-	-
Max	9.0	18.0	9.0	4.5	0.10	0.18	0.03	0.06	bal

Per ASTM A276

Specifications

UNS: S21800

AMS: 5848

ASTM: A193 Class 1C, A276, A479

ASME: SA-193, SA-276, SA-479

Physical Properties

Density	0.275 lb/in ³
Poisson Ratio	0.3
Electrical Resistivity	38.66 μΩ • in
Coefficient of Thermal Expansion (68°F - 212°F)	8.8 x 10 ⁻⁶ μin/in • °F
Modulus of Elasticity (68°F)	26.2 • 10 ⁶ psi

Mechanical Properties

Specification: A276

Ultimate Tensile Strength, ksi	95
0.2% Yield Strength, ksi	50
Elongation, %	35
Hardness MAX, Brinell	241

*Values are minimum unless otherwise stated

Typical Tensile Properties

Temperature, °F	Ultimate Tensile Strength, ksi	0.2% Yield Strength, ksi	Elongation, %
68	107	57	62
200	98	44	63
400	84	33	64
600	81	30	60
800	78	29	57
1000	75	28	52
1200	67	28	48
1400	50	25	47
1600	30	16	73

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Features

- Wear and galling resistant

Applications

- Fasteners
- Pins and bushings
- Wear rails
- Roller bearings
- Pump components

