

Nitronic® 50

Smiths Advanced Metals

Annealed Stainless Steel Bars

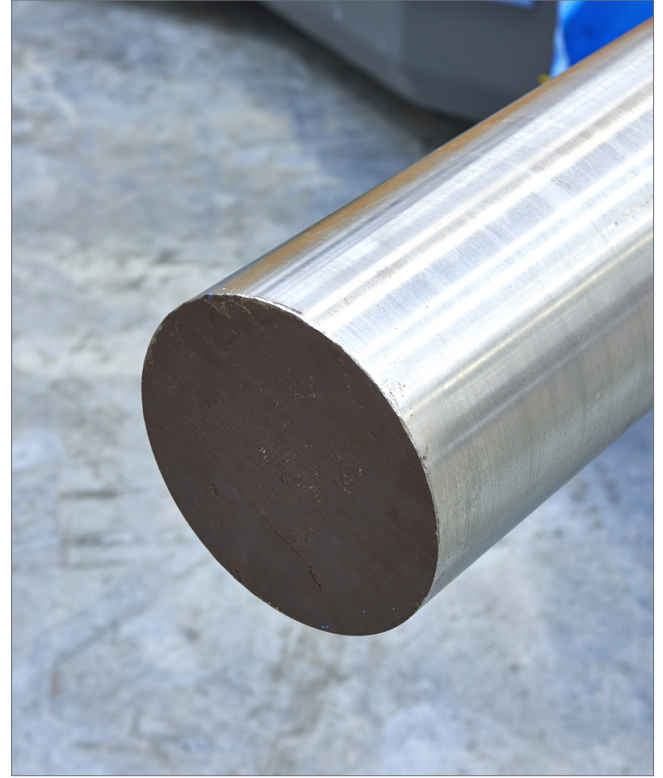
For low and elevated temperature service.

Nitronic® 50 is typically supplied in the annealed condition and offers excellent mechanical properties at both sub-zero and high temperatures.

Annealing gives the alloy its high strength characteristics. The material is suitable for applications where sustained exposure to high or low temperatures is present.

Nitronic® 50 finds typical use in heat exchangers, seawater pumps and naval components. Unlike many austenitic grades, Nitronic® 50 does not become magnetic when cold worked or cooled to sub-zero temperatures. The product provides high strength and improved corrosion resistance compared to most conventional 300 and 400 Series alloys. Nitronic® 50 offers excellent resistance to sulphide cracking and intergranular attack. Welding is possible by traditional methods, although note that welding will result in a loss of mechanical strength.

We stock [Nitronic® 50 stainless steel bars](#) in various incremental sizes and supply products in standard lengths or cut to exact sizes.



Grades / Specifications

- Alloy 50
- X3CrNiMoCuNbN21-13-3
- UNS S20910 (XM-19)
- ASTM A182
- ASTM A276
- ASTM A479

Benefits

- Superior resistance to corrosion
- High strength
- Very good mechanical properties
- Excellent resistance to sulphide cracking

* Chemical Composition (weight %)

	Ni	Cr	Mo	Mn	C	Si	P	S	Nb	N	V	Fe
min.	11.50	20.50	1.50	4.00					0.10	0.20	0.10	
max.	13.50	23.50	3.00	6.00	0.06	1.00	0.040	0.030	0.30	0.40	0.30	Bal

* As per ASTM A182

* Mechanical Properties (minimum values unless otherwise)

Ultimate Tensile Strength	100 KSi
Yield Strength (0.2% OS)	55 KSi
Elongation	35%
Reduction in Area	55%

* Properties as per ASTM A182