

Nitronic 50 is a general-purpose stainless steel alloy that provides good strength, ductility, and toughness. Usable across a wide temperature range, Nitronic 50 fasteners can be used in both extreme heat and cryogenic applications. Nitronic 50 provides improved corrosion resistance and nearly double the yield strength of 316 and 317 stainless. One of its most unique attributes is its low magnetic permeability, which makes Nitronic 50 screws ideal of medical implants.

### Properties

Ultimate Tensile Strength	100 ksi
Yield Strength at 0.2%	55 ksi
Elongation %	35
Usable Temperature Limit	1200°F / 648°C

### Chemistry & Specifications

Nitronic 50	Cr	Ni	Mn	Mo	Si	N	Nb	V	C	P	S	Fe
Min %	20.5	11.5	4.0	1.5	-	0.2	0.1	0.1	-	-	-	-
Max %	23.5	13.5	6.0	3.0	1.0	0.4	0.3	0.3	0.06	0.04	0.01	Bal

SPECIFICATIONS: ASTM A479, UNS S20910, AMS 5848 (bar), W. Nr./EN: 1.3964

### Key Benefits

- Good strength, ductility, and toughness
- Nearly twice the yield strength as well as improved corrosion resistance compared to of 316 and 317 stainless
- Usable in both high temperature and cryogenic applications
- Low magnetic permeability