



Nitronic 60

Nitronic 60 is a fully austenitic alloy. Additions of silicon and manganese help towards its superb resistance to galling, which is a form of wear caused by adhesion between sliding surfaces. Nitronic 60 retains good mechanical properties up to approximately 980°C and has oxidation resistance similar to 309 stainless steel. The general corrosion resistance is somewhere between that of 304 and 316 stainless steel.

Nitronic 60 is used in various applications where excellent galling resistance is needed as there may be a moving/sliding component involved. This would include such things as components which are regularly assembled and disassembled, allowing more use of the fastener before the threads are worn to shreds. Nitronic 60 can also be used in pins, to ensure a better fit of non-lubricated parts with a closer tolerance. This material is also well suited for components in chain-drive systems, roller bearings, valve stems and pump components such as lobes and wear rings.

Nitronic 60 Grades & Equivalents:

- UNS S21800
- ASTM A193
- ASTM A194
- ASTM A276
- ASTM A479
- AMS 5848

Typical Chemical Analysis

C	Si	Mn	P	S	Cr	Ni	Mo
0.10	3.5-4.5	7.0-9.0	0.06	0.03	16.0-18.0	8.0-9.0	
W	N	Cb/Nb	Ti	Co	Cu	Al	B
	0.08-0.18						
V	Fe	Mg	Ta	Ca	O	Bi	Se
	Balance						
Sn	Zn	Pb	Y	Cb/Nb + Ta	Ni + Co	H	PREN

Typical Mechanical Properties

Tensile Strength	655 N/mm ² min
0.2% Proof Stress	345 N/mm ² min
Elongation	35%
Reduction of Area	55%
Hardness *	271 HBw
Impacts	
Stress Rupture	
Other Remarks	* Hardness for ASTM A276 is 241 HBw max

Product Forms Available:

- Hexagon Head Bolts
- Hexagon Nuts
- Studbolts
- Socket Capscrews
- Socket Countersunk Screws
- Socket Setscrews
- & Many other special fasteners and bespoke machined parts

Products can be produced to customer drawings or relevant British (BS), American (ASME, ANSI), European (DIN, UNI) or International Standards (ISO).

The size ranges M3 to M120 Metric and 3/16" to 4.75" Imperial can be supplied. Thread forms include UNC, UNS, UNF, BSW, BSF, Whitworth, Metric, Metric Fine.



Callywhite Lane
Dronfield
Derbyshire
S18 2XR

T: +44 01246 291111

www.westspecialfasteners.co.uk

sales@westspecialfasteners.co.uk



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Callywhite Lane
Dronfield
Derbyshire
S18 2XR

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