

Kormax Nitronic 50 Stainless Steel

Material Data Sheet

Nitronic 50 (XM-19) is a nitrogen-strengthened austenitic stainless steel offering nearly double the yield strength of 304 and 316, with better corrosion resistance than 316L. It stays non-magnetic even after severe cold working and holds good mechanical properties at both high and sub-zero temperatures.

Chemical Composition (%)

Element			
Iron	Fe	Balance	
Chromium	Cr	20.5 - 23.5	
Nickel	Ni	11.5 - 13.5	
Manganese	Mn	4.0 - 6.0	
Molybdenum	Mo	1.50 - 3.00	
Nitrogen	N	0.20 - 0.40	
Columbium	Cb	0.10 - 0.30	
Vanadium	V	0.10 - 0.30	
Silicon	Si	1.00 max	
Carbon	C	0.06 max	
Phosphorus	P	0.045 max	
Sulfur	S	0.030 max	

Mechanical Properties

	Metric Values	Imperial Values
Tensile Strength Min	690 N/mm ²	100,000 psi
Yield Strength Min	380 N/mm ²	55,000 psi
Elongation Min	35%	35%
Hardness (Typ.)	150 HB	150 HB
Specific Gravity	7.89 g/cm ³	

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