Technical Datasheet AWS 162 Rev.1

STAINLESS STEEL 316

Chemical Composition		
Element	Min %	Max %
C	-	0.07
Mn	-	2.00
P	-	0.045
S	-	0.03
Si	-	1.00
Cr	16.00	18.50
Ni	9.50	13.00
Mo	2.00	2.50

Specifications

ASTM A313
ASTM A580
BS 970
BS 2056

Designations

W.Nr. 1.4401
W.Nr. 1.4404
UNS S31600
AWS 162

Key Features

Better corrosion resistance and non-magnetic properties than 302 and 304 stainless

Better pitting and crevice corrosion resistance than 302 and 304 stainless

Typical Applications

More suited to Marine, Food and Medical applications than 302 and 304 stainless

Food processing

Springs

Engineered components

Wire mesh

Wire cloth

Hose braiding

Density	8.0 g/cm^3	0.289 lb/in^3
Melting Point	1398 °C	2555 °F
Coefficient of Expansion	17.5 µm/m °C (20 – 100 °C)	9.7 x 10^{-6} in/in °F (70 – 212 °F)
Modulus of Rigidity	70.3 kN/mm^2	10196 ksi
Modulus of Elasticity	187.5 kN/mm^2	27195 ksi

Heat Treatment of Finished Parts					
Condition as supplied by Alloy Wire	**Type**	**Temperature**		**Time (Hr)**	**Cooling**
		°C	**°F**		
Annealed or Spring Temper	Stress Relieve	250	480	1	Air

Properties				
Condition	**Approx. tensile strength**		**Approx. operating temperature**	
	N/mm^2	**ksi**	**°C**	**°F**
Annealed	600 – 800	87 – 116	-200 to +300	-330 to +570
Spring Temper	1300 – 2200	189 – 319	-200 to +300	-330 to +570

The above tensile strength ranges are typical. If you require different please ask.