

ALLOY 600 NICKEL TUBING

Alloy 600 has great applications for a number of uses where the ability to resist highly corrosive environments with extremely high temperatures is present. The blend of nickel and chromium yields a solid resistance to oxidation in operating temperatures ranging from cryogenic levels to scorching 2,000°F. The high nickel content makes near complete resistance to stress corrosion cracking in chloride environments possible. The chromium portion of the alloy's chemical profile provides the ability to withstand high temperatures. While the finer grain structure of the cold finished tube product brings better corrosion resistance, as well as higher fatigue and impact strength values.

PRODUCT SPECIFICATIONS

ASTM B163, B167 / ASME SB163 /
NACE MR0175, MR0103

SIZE RANGE

Outside Diameter (OD)	Wall Thickness
.250"-.750"	.035"-.083"

CHEMICAL REQUIREMENTS

ALLOY 600 (UNS N06600)
COMPOSITION %

Ni	Nickel	72.0 min
Cu	Copper	0.50 max
Fe	Iron	6.00-10.00
Mn	Manganese	1.00 max
C	Carbon	0.15 max
Si	Silicon	0.50 max
S	Sulfur	0.015 max
Cr	Chromium	14.0-17.0

DIMENSIONAL TOLERANCES

OD	OD Tolerance	Wall Tolerance
≤ .500" excl	+ .005"	± 12.5%
.500"-.750" excl	+ .005"	± 12.5%

MECHANICAL PROPERTIES

Yield Strength	35 ksi min
Tensile Strength	80 ksi min
Elongation (min 2")	30%

FABRICATION

Alloy 600 can be easily welded by standard process. The manageability of this alloy is excellent, residing between the utility of T303 and T304.

OD	Wall	ID	Lbs./Ft.	Bursting PSI	Working PSI
1/4" (.250")	.035	.180	.0868	20,160	5,040
3/8" (.375")	.035 .049	.305 .277	.1373 .1843	13,440 18,816	3,360 4,704
1/2" (.500")	.035 .065 .083	.430 .370 .334	.1877 .3262 .3993	10,080 18,720	2,520 4,680
3/4" (.750")	.065	.620	.5136	18,240	4,560

All pressure ratings are approximate and for illustration purposes only.
Values are not guaranteed or warranted.

TYPICAL APPLICATIONS

Offshore
Subsea
Aerospace
Nuclear
Heat Exchangers
Offshore Applications
Chemical Processing

