

INCONEL 600 SPRING WIRE

Inconel 600 is a spring quality, cold drawn wire made from a nickel base. It provides good corrosion resistance at operating temperatures up to 700⁰ F. The alloy also has excellent mechanical properties and presents the desirable combination of high strength and good workability. The high nickel content gives the alloy resistance to corrosion by many organic and inorganic compounds and also makes it virtually immune to chloride stress-corrosion cracking. The alloy is not precipitation hardenable; it is hardened and strengthened only by cold working per ASTM-B-166. Wire is available in size ranges from .025”-.500”

Chemical Composition Per ASTM-B-166	%	Dimensional Tolerances	Tolerance (inch)
Nickel ¹	72.0 min	Up to .0044 incl	+/- .0002
Chromium	14.0 – 17.0	Over .0044 to .0079 incl	+/- .00025
Iron	6.0 – 10.0	Over .0079 to .0149 incl	+/- .0003
Manganese	1.0 max	Over .0149 to .0199 incl	+/- .0004
Copper	0.50 max	Over .0199 to .031 incl	+/- .0005
Carbon	0.15 max	Over .031 to .045 incl	+/- .0006
Silicon	0.50 max	Over .045 to .079 incl	+/- .0007
Sulfur	0.015% max	Over .079 to .1875 incl	+/- .0010
		Over .1875 to .3125 incl	+/- .002
		Over .3125 to .563 incl	+/- .003

¹ Cobalt counting as nickel

Tensile Strength Table (ASTM-B-166)

Dia. Inch	Tensile Min PSI	Tensile Max PSI
Up to .057 incl	185,000	---
Over .057 to .114 incl	175,000	---
Over .114 to .229 incl	170,000	---
Over .229 to .329 incl	165,000	---
Over .329 to .375 incl	160,000	---
Over .375 to .500 incl	155,000	---
Over .500 to .563 incl	140,000	---

The above charts are intended to provide general background information. You should also review the appropriate material specification. Please contact Gibbs if you have any questions.