



# Superelastic Nitinol Wire

## General Information

**T-FLEX** is the superelastic Nitinol wire developed by *Kuangtai Metal* with its advanced wire processing technologies. The raw materials are sourced from qualified smelters, which ensures the finished wire conforms to medical standard ASTM F2063. Subsequently, every process, from wire drawing, annealing, oxidizing/deoxidizing, to thermal-mechanical treatment is strictly controlled in order to produce designated wire properties with tight tolerances. The rigorous process control makes **T-FLEX** suitable for applications in critical industries such as medical devices and automobiles.

## Material Properties

☐ Conforms to **ASTM F2063** standard

☐ **Chemical composition :**

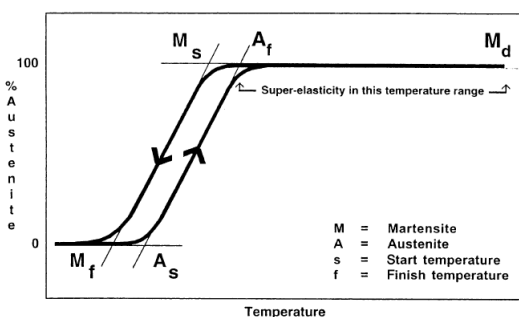
		unit: wt%	
Ni	54.5 - 57.0	Cr	0.010 max.
C	0.050 max.	H	0.001 max.
Co	0.050 max.	Fe	0.050 max.
Cu	0.010 max.	Nb	0.025 max.
N+O	0.050 max.	Ti	Balance

☐ **Mechanical properties:**

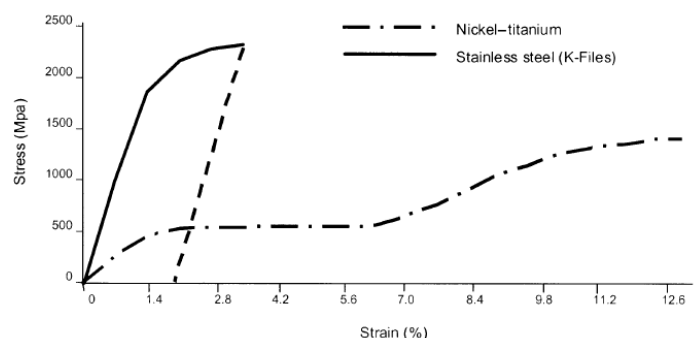
Condition	Tensile Strength, min.	Elongation, min.
Annealed	551 MPa (80 ksi)	15%
Cold drawn	Designated by agreement (typical value 1200 MPa)	Designated by agreement (typical value 4%)

☐ Transformation temperature  $A_s$  of ingot (fully annealed):  $-25\text{ }^\circ\text{C} \pm 10\text{ }^\circ\text{C}$

☐ Permanent set after 6% strain: 0.5% max.



Phase transformation hysteresis of Nitinol



Stress-strain curve of Nitinol v.s. stainless steel



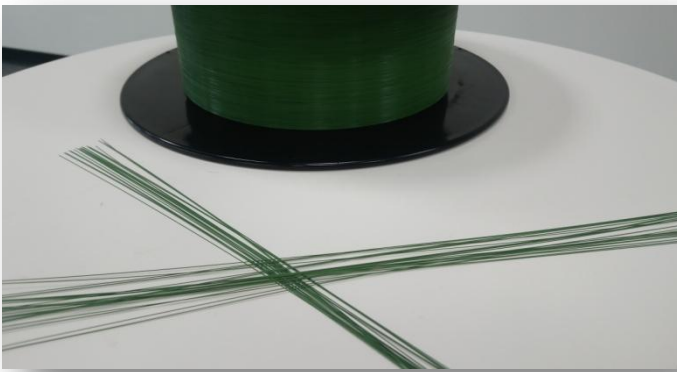
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## Surface Condition

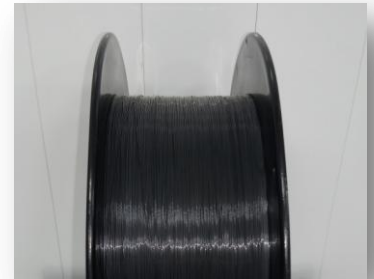
Surface	Color
Pickled	sliver - light grey
Light Oxide	golden - amber
Dark Oxide	dark blue - purple
PTFE Coated	green, blue, clear



Light oxide



PTFE coated



Dark oxide

## Geometric & Package Options

Supply Form	Wire Size Dia. & Length	Wire Straightness Camber/length	Package
Wound on spool	$\phi$ .008" - .140" (0.2 - 3.6 mm)	.040"/1' max. (1mm/300mm max.)	Welding wire spool (D-300)
	$\phi$ .002" - .008" (0.05 - 0.2 mm)		DIN 160 / DIN 100 plastic bobbin
Cut length	$\phi$ .008" - .140" (0.2 - 3.6 mm) L 10 cm - 300 cm	Ideally straight (no wobbling when rolling on a flat surface)	Plastic or paper tube

\* Customized specifications are also available upon request.

Please send in your inquiries to:  
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