

# Conductor Properties

	Purity % or Composition	Resistivity ( $\Omega/cm$ @ 0°C)		Temp. Coeff. of Resistance (°C <sup>-1</sup> , 0-100°C)		Tensile Strength (KPSI)		Elongation (Percent)		Melting Point (Solidus) °C	Density (g/cm <sup>3</sup> )
		Hard	Annld.	Hard	Annld.	Hard	Annld.	Hard	Annld.		
Constantan	43-45% Ni 55-57% Cu Mn, Fe	315	294	±0.00003	±0.00002	150	80	2	32	1270	8.86
Copper*	99.98%	9.44	9.24	0.0041	0.0043	76	32	1.5	46	1083	8.93
35N LT®-DFT®-25%Ag**	25% Ag	38.4	38.0	0.0031	0.0031	220	150	1.5	20	962	8.95
	Balance = 35N LT										
35N LT-DFT-28%Ag**	28% Ag	34.2	33.8	0.0031	0.0031	215	145	1.5	20	962	9.01
	Balance = 35N LT										
35N LT-DFT-33%Ag**	33% Ag	30.3	29.9	0.0033	0.0033	200	135	1.5	20	962	9.12
	Balance = 35N LT										
35N LT-DFT-41%Ag**	41% Ag	23.9	23.5	0.0034	0.0034	180	125	1.5	20	962	9.29
	Balance = 35N LT										
Gold	99.99%	12.8	12.6	0.0038	0.0039	46	20	1.5	36	1063	19.3
MP35N*** 35N LT****	35% Ni 35% Co 20% Cr 10% Mo	595	620	0.0002	0.0002	362	150	2.8	45	1440	8.43
Nichrome	80% Ni 20% Cr	630	650	0.0001	0.0001	200	100	2	26	1400	8.4
Platinum	99.999%+	59	57.6	0.00386	0.003926	60	24	2	38	1769	21.45
Platinum/Iridium	90% Pt 10% Ir	154	150	0.0012	0.0013	130	55	2	24	1800	21.53
Platinum/Iridium	80% Pt 20% Ir	193	186	0.0007	0.0008	193	100	2	20	1840	21.61
Tungsten*****	99.98%+	39	33	0.0036	0.0048	320	160	1.5	16	3410	19.3
Stainless Steel #316	16-18.5% Cr 10-14% Ni 2-3% Mo Fe, C, MN Si, P, S	470	445	n/a	n/a	250	75	10	40	1375 - 1400	8

\* Copper is also available with Silver plating, Nickel plating, and Gold plating.

\*\* DFT® is a registered trademark of Fort Wayne Metals Research Products Corp.; for more information on these materials please visit [www.fortwaynemetals.com](http://www.fortwaynemetals.com). Please note that the melting point of DFT® is limited by silver core material.

\*\*\* Registered trademark of SPS technologies. A typical MP35N®/Silver DFT wire material (MP-DFT-Ag) may have a variety of tensile values depending upon the amount of cold work and core percentages of the individual wires

\*\*\*\* 35N LT is an ultra-clean, improved fatigue version of ASTM F562 and is a registered trademark of Fort Wayne Metals Research Products Corp. MP35N and 35N LT conform to the ASTM F562 chemistry specification.

\*\*\*\*\* Tungsten is also available with Gold plating.