



Alumel®, Extension Grade*

Extension grade Alumel (KNX) is a lower cost version of the well-known Alumel Thermocouple Grade alloy. While virtually identical in composition and physical properties, it is guaranteed to a lower maximum use temperature (generally 200 °C max.).

Industry Specifications: ASTM E-230; UNS N02016

Nominal Composition: 95 Ni, 2 Mn, 2 Si, 1 Al

Typical Physical Property Data

Thermocouple Type (ANSI designation)	KNX	
Recommended Extension Wire	N.A.	
Approximate Melting Point	2550°F	
	(1399°C)	
Specific Gravity	8.60	
Density (lb./in ³)	.3107	
(g/cm ³)	8.60	
Nominal Resistivity (Ω•mil ² /ft.)	177	(at 20 °C)
(μΩ/cm ³)	29.4	(at 20 °C)
Temp. Coef. Of Resistance (Ω/Ω/°C) E-4	18.8	(20 to 100 °C)
Temp. Coef. Of Expansion (cm/cm/°C) E-6	12.0	(20 to 100 °C)
Thermal Cond. (W/cm ² /cm/°C)	0.297	(at 100 °C)
Magnetic Response	Mag.	(at 20 °C)

Typical Mechanical Properties:

Tensile Strength, annealed (ksi)	85
Yield Strength, annealed (ksi)	40
Elongation, annealed (%)	35

*Trademarked and Sold Exclusively by: Concept Alloys, Inc.