Brand Name	**NICKEL 99.2**
Material Code	**2.4066**
Abbreviation	**Ni 99.2**

Chemical Composition (mass components) in %.

Ni ≥ 99.2					

Features and Application Notes
NICKEL 99.2 is especially characterized by very high resistance to oxidation and chemical corrosion, relatively low resistivity and a very high temperature coefficient. The material is used in many different applications, for example for the manufacture of connections for heating elements. NICKEL 99.2 is magnetic up to approx. +360 °C. The maximum working temperature in air is +700 °C.

Form of Delivery
NICKEL 99.2 is supplied in the form of round wires in the range 0.05 to 5.00 mm Ø in bare or enamelled condition.

Electrical Resistance in Annealed Condition

Temperature coefficient of electrical resistance between	Electrical resistivity in: µΩ x cm (first line) and Ω/CMF (second line) Reference Values					
0 °C and +100 °C 10^{-6}/K	+20 °C tolerance ±10 %	+100 °C	+200 °C	+300 °C	+400 °C	+500 °C
+4,700 to +5,800	**9**	**13**	**19**	**26**	**33**	**38**
	54	**78**	**114**	**156**	**199**	**229**

Physical Characteristics (Reference Values)

Density at +20 °C		Melting point	Specific heat at +20 °C	Thermal conductivity[1] at +20 °C	Average linear thermal expansion coefficient between +20 °C and		Thermal EMF against copper at
					+100 °C	+400 °C	+20 °C
g/cm³	**lb/cub in**	**°C**	**J/g K**	**W/m K**	**10^{-6}/K**	**10^{-6}/K**	**µV/K**
8.90	**0.32**	**+1,440**	**0.47**	**69.00**	**13.00**	**14.00**	**-23.00**

Mechanical Properties at +20 °C in Annealed Condition

Tensile Strength[2]		Elongation (L_0 = 100 mm) % at nominal diameter in mm				
MPa	**psi**	0.020 to 0.063	> 0.063 to 0.125	> 0.125 to 0.50	> 0.50 to 1.00	> 1.00
450	**65,250**	**≈ 10**	**≈ 15**	**≈ 18**	**≥ 20**	**≥ 25**

General Note // NICKEL 99.2 is not a standard resistance alloy. Therefore no resistance values are quoted. The weight values correspond to those of ISOTAN® wires of the same diameter.

Notes on Treatment // NICKEL 99.2 can be worked easily. This alloy can be soldered and brazed without difficulty. All known welding methods can be used.

1) As with all pure metals, the thermal conductivity strongly depends on the purity and temperature.
2) This value applies to wires of 2.0 mm diameter. For thinner wires the minimum values will substantially increase, depending on the dimensions.

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