



Brand Name	ISASIL		
Material Code	-		
Abbreviation	NNC		
Chemical Composition (mass components.) in % average values of alloy components			
Cu Balance	Ni 44	Mn 3	Fe 2

Form of Delivery

ISASIL is supplied in the form of wires with dimension from 0.05 to 8 mm \varnothing in bare condition. Enamelled wires are available in dimension between 0.05 and 1.5 mm \varnothing . ISASIL can also be supplied in form of stranded wire, ribbon, flat wire and rods. Please contact us for the range of dimension.

Features and Application Notes

ISASIL is used as negative leg for compensating lead of the element type N
ISASIL is standardized in the temperature range between 0 and 150°C.
ISABELLENHÜTTE delivers ISASIL in standardized tolerance up to 200°C (400°F).

Thermoelectrical and Electrical Values in Soft-Annealed Condition

EMF vers. Pt/NIST 175 0-200 ° F / mV	EMF vers. Pt67/NIST 175 0-100 ° C / mV	EMF vers. Pt/NIST 175 0-400 ° F / mV	EMF vers. Pt67/NIST 175 0-200 ° C / mV	Electrical resistivity at 20°C in	
				$\mu\Omega \times \text{cm}$	$\Omega / \text{cir mil ft}$
-1.866	-2.001	-4.170	-4.077	52	312

Physical Characteristics (Reference Values)

Density at 20 ° C		Melting Point	Specific heat at 20 ° C	Thermal conductivity at 20 ° C	Average linear thermal expansion coefficient between 20 ° C and 100 ° C	Magnetic at room temp.
g/cm ³	lb/cub in	°C	J/g K	W/m K	10 ⁻⁶ /K	no
8.9	0.322	1280	0.41	23	13,5	no

Mechanical Properties at 20 °C in Annealed Condition (Reference Values) ¹⁾

Annealing State	Tensile Strength		Elongation %	Hardness HV10
	MPa	lb / sq in		
hard	>840	121800	<2	>240
soft	500	72500	30	120

1.) The mechanical values considerably depend on dimension. The indicated values refer to a dimension of 1 mm diameter.

Notes on Treatment

ISASIL is easy to process. The alloy can be soldered and brazed without difficulty. All known welding methods are applicable.