



Brand Name	NOVENTIN®			
Material Code				
Abbreviation	CuMnNi			
Chemical Composition (mass components) in %.				
Average values of alloy components				
Cu	Mn	Ni		

Features and Application Notes

The newly developed alloy NOVENTIN® is in the best tradition of Isabellenhütte's precision resistance alloys ZERANIN® 30, MANGANIN® and ISAOHM®. With its high specific electrical resistance, NOVENTIN® closes the gap between MANGANIN® and ISAOHM®.

Like MANGANIN®, an alloy which has been used in many different fields for a long time, NOVENTIN® stands out particularly due to a small temperature coefficient of the electrical resistance between +20 and +50 °C with a parabolic behaviour of the R/T curve, a high long-term stability of the electrical resistance, an extremely low thermoelectric power against copper and a good workability.

Due to these features, NOVENTIN® is excellently suitable for the production of precision, standard and shunt resistors. The maximum application temperature under atmosphere is +140 °C.

Electrical Resistance in Annealed Condition

Temperature coefficient of the electrical resistance at	+20 °C	+100 °C	+200 °C	+300 °C	+400 °C	+500 °C
+20 °C and +50 °C 10 ⁻⁶ /K	+20 °C tolerance ±5 %					
±10	90	90				
	270	270				

Physical Characteristics (Reference Values)

Density at +20 °C	EMF vs. copper at +20 °C	Ultimate tensile strength		Elongation
g/cm³	µV/K	MPa	psi	%
8.10	±0.30	550.00	80,000	30.00

Development phase

Qualification phase	Samples available from	Presentation
August 2013 – Dezember 2013	January 2014	Wire, Düsseldorf, April 2014

Processing note // NOVENTIN® is well processable. The alloy can be soldered, however, it develops a thin oxide layer under atmosphere which has to be removed before processing. With an adequate soldering flux, NOVENTIN® is also suitable for dip soldering. Resistors made of NOVENTIN® have to be aged in order to reduce mechanical tensions.