Brand Name	**NOVISTHERM®**
Material Code	
Abbreviation	**CuMn25Ni10**

Chemical Composition (mass components) in %.
Average values of alloy components

Cu	**Mn**	**Ni**			
Rest	25	10			

Features and Application Notes

NOVISTHERM® is especially characterized by a high resistivity. With its high specific electrical resistance, NOVISTHERM® closes the gap between Cu- and Ni-based heating conductor alloys.

NOVISTHERM® is non-magnetic and possesses a low temperature coefficient and EMF values. The alloy shows better welding properties and workability than Ni-alloys.

NOVISTHERM® is suitable for heating wires of any application, also for heating cords and cables. The alloy is well known for heating elements with low conductor temperatures. The maximum working temperature in air is 400 °C.

Many applications can be found in the plastic sealing and cabling industry, where high-prized Ni-based alloys can be replaced.

Due to its low melting point, NOVISTHERM® is also proved successfully in powder metallurgical manufacturing processes.

Form of Delivery

NOVISTHERM® is supplied in the form of round wires in the range 0.10 to 5.00 mm Ø in bare or enamelled condition. The product line includes sheets, ribbons, flat wires, stranded wires and rods.

Electrical Resistance in Annealed Condition

Temperature coefficient of the electrical resistance at	Electrical resistivity tolerance ±5 %					
		+20 °C	+100 °C	+200 °C	+300 °C	
+20 °C and +50 °C 10^{-6}/K		Nom. value		Reference values		
±10	**µΩ x cm**	**90**	**90**	**89**	**90**	
	CMF	**540**	**541**	**535**	**541**	

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	Thermal EMF against copper at
					+100 °C	+20 °C
g/cm³	**lb/cub in**	**°C**	**J/g K**	**W/m K**	**10^{-6}/K**	**µV/K**
8.1	**0.291**	**+940**	**0.47**	**12.5**	**18.5**	**± 0.5**

Strength Properties at +20 °C in Annealed Condition

Tensile Strength[2]		Elongation (L_0 = 100 mm) % at nominal diameter in mm				
MPa	**psi**	> 0.063 to 0.125	> 0.125 to 0.50	> 0.50 to 1.00		
550	**80,000**	**≈ 18**	**≈ 20**	**≥ 20**		

1) NOVISTHERM® is a registered trademark of Isabellenhütte Heusler GmbH & Co. KG.
2) This value applies to wires of 1.0 mm diameter. For thinner wires the minimum values will substantially increase, depending on the dimensions.