



# **Technical datasheet**

### Constantan TCR / CuNi44Mn1Fe

Constantan TCR is a copper-nickel alloy consisting usually of 55% copper and 44% nickel and specific minor amounts of additional elements to achieve almost constant values for the temperature coefficient of resistivity (TCR). Its key attribute is the low thermal variation in its resistivity, which is constant over a wide range of temperatures.

## **Available products**

#### **Product form**

Sheet and strip

Rod and wire

### **Chemical composition (%)**

Ni	Mn	Fe	Cu
44.0	1.3	0.4	Balance

# **Physical properties**

Density, g/cm <sup>3</sup>	8.85
Melting point, °C	1210
Thermal conductivity at 20°C, W/m.°C	25
Electrical resistivity at 20°C, μΩ.cm	50
For Constantan TCP at temperatures between 20 105°C	1/ 20ppm/°C can be ashioused

For Constantan TCR at temperatures between 20-105°C, +/- 20ppm/°C can be achieved

## **Applications**

Electrical engineering

Pyrometry

Shunts and precision resistors

Nuclear energy

Oil and gas

Electronics

**Telecommunications** 

Defence

Aerospaces

Currency and medals

All information is subject to change without notice. The properties correspond to the material in the heading. They may vary for other specifications. Please contact us for more details.