

## TECHNICAL DATA SHEET

# Cobalt Alloy KO

### General notes:

#### » Austenitic Cobalt alloy

- » Excellent strength
- » Very high shape retention
- » Very high elasticity
- » Excellent resistance to fatigue
- » Fully non-magnetic (100%)
- » Excellent corrosion resistance to organic acids, superior to most stainless steels for inorganic/mineral acids
- » Bio-compatible with human body tissue
- » Wide temperature range - from -269°C (Helium liquid) to approx. 500°C
- » Typical applications include surgical implants and medical instruments, pacemaker electrodes, aeronautical and aerospace equipment and naval equipment. Cobalt alloy materials are also used for non-magnetic tools in electronic and watch industries, as well as for laboratory and medical applications in harsh chemical and extreme environments such as aerospace, nuclear, and marine.
- » Thanks to this alloy tweezer tips have a high fatigue resistance and maintain their elasticity throughout their lifespan, resulting in exceptional durability that is unmatched by other materials.

## Mechanical properties

State	<b>50% cold reduction</b>
Density	<b>8.3 g/cm<sup>3</sup></b>
Hardness Vickers	<b>201 HV</b>
Tensile strength, ultimate	<b>852 MPa</b>
Tensile strength, yield	<b>424 MPa</b>
Elongation, break	<b>50%</b>
Modulus of elasticity	<b>210 GPa</b>

## Thermal properties

Coef. of lin. therm expansion	<b>12.5 E-6/°C</b>	<b>25°C-100°C</b>
Specific heat capacity	<b>0.45 J/(g K)</b>	
Thermal conductivity	<b>12.5 W/(m K)</b>	
Continuous use temperature	<b>380°C</b>	
Max service temperature, air	<b>450°C</b>	

## Electrical properties

Resistivity	<b>0.95 E-4 Ohm·cm</b>
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