

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	50% cold reduction
Density	8.3 g/cm³
Hardness Vickers	201 HV
Tensile strength, ultimate	852 MPa
Tensile strength, yield	424 MPa
Elongation, break	50%
Modulus of elasticity	210 GPa

Thermal properties

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

Electrical properties

Resistivity	0.95 E-4 Ohm·cm
-------------	------------------------

This document contains information based on average values as obtained from the results of laboratory tests and observations made on the material. Ideal-tek SA declines all responsibility from an improper use of the product described in this document.