

TECHNICAL DATA SHEET

Superalloy CX

General notes:

- » **Ni-Cr-Mo superalloy**
- » excellent strength from room temperature to 800 °C
- » very high shape retention
- » resistant to fatigue
- » fully non-magnetic (100%)
- » excellent corrosion resistance to most chemicals, salts and acids
- » typical applications include non-magnetic tools for electronic and watch industry applications and for laboratory and medical applications in aggressive chemical and extreme environments (aerospace, nuclear, marine)

Mechanical properties

| | |
|----------------------------|-----------------------------|
| State | 50% cold reduction |
| Density | 8.4 g/cm³ |
| Hardness Vickers | 260 HV |
| Tensile strength, ultimate | 925 MPa |
| Tensile strength, yield | 485 MPa |
| Elongation, break | 50% |
| Modulus of elasticity | 208 GPa |

Thermal properties

| | | |
|-------------------------------|---------------------|-------------------|
| Coef. of lin. therm expansion | 12.8 E-6/°C | <i>25°C-100°C</i> |
| Coef. of lin. therm expansion | 13.4 E-6/°C | <i>25°C-300°C</i> |
| Specific heat capacity | 0.41 J/(g K) | |
| Thermal conductivity | 10 W/(m K) | |
| Continuous use temperature | 600°C | |
| Max service temperature, air | 980°C | |

Electrical properties

| | |
|-------------|------------------------|
| Resistivity | 1.29 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.