

#### **TECHNICAL DATA SHEET**

# Carbon steel type C

#### **General notes:**

- » Carbon style (material number 1.1231, C67S, AISI 1070)
- » contains from 0,65 0,73 wt% carbon
- » magnetizable
- » will be hardened by heat treatment, max. hardness 60 HRC
- » poor resistance to corrosion
- » used where strength and/or hardness are of primary concern
- y typical applications include tweezers and cutting tools for the electronic industry, medical device manufacturers, watch-makers, jewelers applications

## Composition

Component	Wt.%	Component	Wt.%	Component	Wt.%
С	0.65 - 0.73	Si	0.15 - 0.35	Cr	≤ 0.4
Р	≤ 0.025	S	≤ 0.025		

## Mechanical properties

Density	7.7 - 8.03 g/cm <sup>2</sup>
Hardness, Vickers	700 HV
Tensile strength, ultimate	533 - 534 MPa
0.2% Yield stress	358 - 365 MPa
Modulus of elasticity	200 GPa

## Thermal properties

Coef. of lin. therm expansion	11 E-6/°C	20°C - 100°C
Coef. of lin. therm expansion	12 E-6/°C	20°C - 300°C
Specific heat capacity	0.50 J/(g K)	
Thermal conductivity	50 W/(m K)	

# Electrical properties

Resistivity 0.17 - 0.23 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.