

**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
- » 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. %
<b>C</b>	0.65 - 0.73	<b>Si</b>	0.15 - 0.35	<b>Cr</b>	≤ 0.4
<b>P</b>	≤ 0.025	<b>S</b>	≤ 0.025		

## Mechanical properties

Density	<b>7.7 - 8.03 g/cm<sup>3</sup></b>
Hardness, Vickers	<b>700 HV</b>
Tensile strength, ultimate	<b>533 - 534 MPa</b>
0.2% Yield stress	<b>358 - 365 MPa</b>
Modulus of elasticity	<b>200 GPa</b>

## Thermal properties

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

## Electrical properties

Resistivity	<b>0.17 - 0.23 E-4 Ohm.cm</b>
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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.