

TECHNICAL DATA SHEET

Carbon steel type C

General notes:

- » **Carbon style** (material number 1.1221, Ck60, AISI 1060)
- » contains from 0,57-0,65 wt% carbon
- » magnetizable
- » will be hardened by heat treatment, max. hardness 57 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, watch-makers, jewelers applications

Composition

Component	Wt. %	Component	Wt. %	Component	Wt. %
C	0.57-0.65	Si	0.15-0.35	Cr	≤0.4
P	≤0.035	S	≤0.035		

Mechanical properties

Density	7.9 g/cm³
Hardness, Vickers	55-57 HRC
Tensile strength, ultimate	850-1000 MPa
0.2% Yield stress	500 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	0.502 J/(g·K)	
Thermal conductivity	52 W/(m·K)	

Electrical properties

Resistivity	0.18 E-4 Ohm.cm
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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.

TECHNICAL DATA SHEET

Industrial coating type NP

General notes:

- » This **pure nickel coating** is generally used to improve the resistance of tools made of carbon steel. The coating is deposited by electroplating technique



Mechanical properties

This coating is hard and elastic and has a very good resistance to mechanical stress

Thickness	20-30 microns
Hardness	200-500 Vickers
Tensile Strength	70-140 kg/mm²
Elongation	25-35%



Wear and abrasion resistance

Improved resistance to wear and abrasion



Aging

Superior aging and oxidation resistance



Chemical resistance

Superior corrosion resistance to saltwater, alkalies and organic acids

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