

Technical Datasheet: Carbon steel type C

General Notes

- **Carbon steel** (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:

State	
Density	7.9 g/cm ³
Hardness	55-57 HRC
Tensile strength, ultimate:	850-1000 MPa
0.2% Yield stress	550 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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