

# Datenblatt | Data sheet

## Weldable iron 1.1121

The low carbon balls are unhardened, drillable and weldable.

### Field of application

Bicycle components, chassis, wrought iron handicraft products, various mechanisms, applications for welding

### Material

Technical name	Alternative Name	Valid standards
1.1121	AISI 1010 soft, C10	ISO 3290-1 / DIN 5401

### Chemical composition in %

C	Si	Mn	P	S
0,08 - 0,13	0,10 - 0,35	0,30 - 0,60	≤ 0,040	≤ 0,050

### Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	$\delta$	g/cm <sup>3</sup>	Physical	Environmental temp.	7,82
Modulus of elasticity	E	GPa	Mechanical	-	200
Specific heat	C	J/kg*K	Thermal	Environmental temp.	468
Coefficient of linear thermal expansion	$\alpha$	10 <sup>-6</sup> /°C	Thermal	(DT = 0 - 100 °C)	11,8
Thermal conductivity	$\lambda$	W/(m*K)	Thermal	Environmental temp.	57,9
Volume resistivity	$\rho$	$\Omega$ *m <sup>-9</sup>	Electrical	-	155
Relative magnetic permeability	$\mu$	-	Magnetical	ferromagnetic	> 500

### Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	HRB	60 - 90	-	-
Ultimate compressive strength	Mechanical	MPa	200 - 300	psi*10 <sup>3</sup>	29 - 43
Operating temperature	Thermal	°C	-40 - 500	°F	-40 - 932

### Available with

Diameter min/max (mm)	Diameter min/max (in)	Precision grade
1,500 - 300,000	1/16 - 12,0	G 100 / 200 / 300 / 500 / 600 / 700 / 1000

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V1.01 / December 2020