

## boway 10200

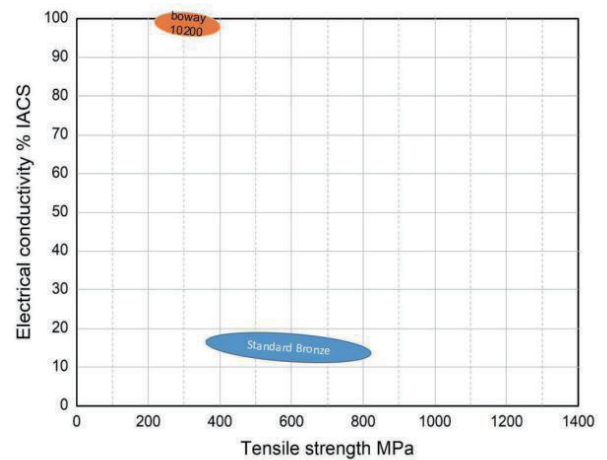
### Material Designation

Boway designation	boway 10200
UNS	C10200
EN	Cu-OF
JIS	C1020
GB(China)	TU3

### Chemical Composition\*

Cu	>99.95	%
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\* Nominal composition



### Application Target

Signal Connector	Suitable
Power Connector	Very suitable
Miniaturized Connector	Not recommend
Switch / Relay	Suitable
Semiconductor	Suitable

Ideal for power connectors, Bus bar.

### Characteristics

This alloy has no hydrogen embrittlement, high electrical conductivity, excellent processing and welding properties, corrosion resistance and low temperature performance.

### Fabrication Properties

Cold forming	Very good
Machining	Average
Electroplating	Very good
Hot dip tinning	Very good
Laser welding	Not suitable
Resistance welding	Good
Soft soldering	Very good

### Physical Properties\*

Density	8.94	g/cm <sup>3</sup>
Electrical conductivity @ 20°C	100	% IACS
	58	MS/m
Thermal conductivity @20°C	391	W/(m·K)
Specific heat capacity	0.385	J/(g·K)
Modulus of elasticity	115	GPa
Poisson's ratio	0.34	
Coefficient of thermal expansion**	17.7	10 <sup>-6</sup> /K

\* Typical values at room temperature for reference.

\*\* average value between 20-300°C

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### Mechanical Properties

Temper	Tensile strength		Yield strength	Hardness*	Elongation
	MPa	ksi	MPa	HV0.2	A50 %
R220(H00)	220-260	32-38	≤140	40-70	≥33
R240(H02)	240-300	35-44	≥180	65-95	≥8
R290(H04)	290-360	42-52	≥250	90-110	≥4
R360(H10)	≥360	≥52	≥320	≥110	≥2

\*For reference only

### Bendability Bending Thickness: ≤0.5 mm , bending width: 10mm

Temper	90° R/T		180° R/T	
	Good Way	Bad Way	Good Way	Bad Way
R220(H00)	0	0	-	-
R240(H02)	0	0	-	-
R290(H04)	0	0.5	-	-
R360(H10)	1.0	2.0	-	-

90° bend test According to EN ISO 7438, 180° bend test acc. to ASTM B820, shown values might show orange-peel, however no crack.

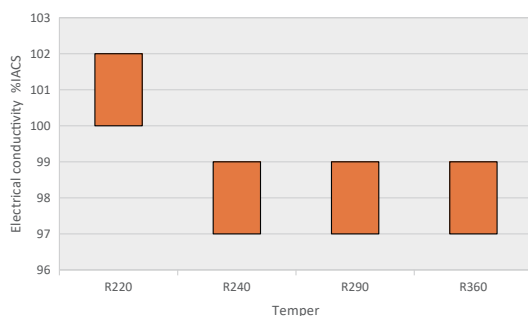
### Packaging

Standard coils with outside diameters up to 1300 mm.,  
 Traverse-wound coils with drum weights up to 500 kg.  
 Multiple-coil up to 3 tons.

### Dimensions available

Strip thickness 0.08 - 4.0 mm, other gauges on request  
 Strip width from 8.5 mm  
 Electroplated and Hot-dip tinned strip available

### Electrical Conductivity



### Fatigue Strength

The fatigue strength is defined as the maximum bending stress amplitude which a material withstands for 10.000.000 load cycles under symmetrical alternate load without breaking. It depends on the temper selected and can be estimated typically by 1/3 of Tensile strength. For solid solution fine grain materials fatigue strength might increase up to 0,5 \* of Tensile strength.