

boway 15100

Material Designation

Boway designation	boway 15100
UNS	C15100
EN	CuZr0.1
JIS	C1510
GB(China)	TZr0.1

Chemical composition*

Zr	0.05 - 0.15	%
Cu	Rem	

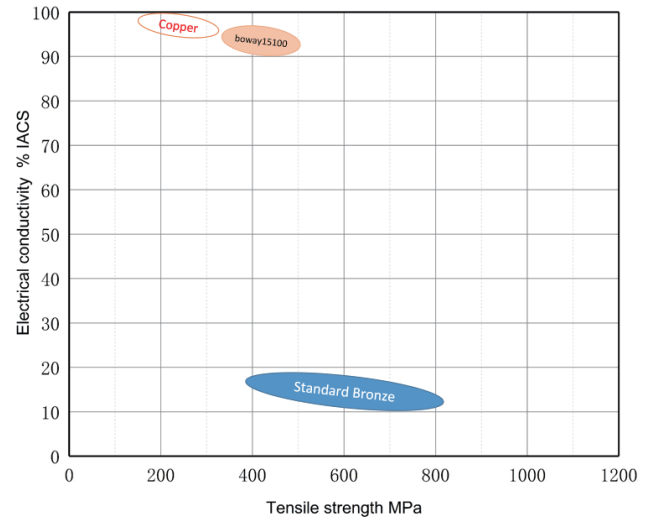
* Nominal composition

Application Target

Signal connector	Suitable
Power connector	Very suitable
Miniaturized connector	Suitable
Switch / Relay	Suitable
Semiconductor	Suitable

Fabrication Properties

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



Characteristics

High conductivity and medium strength, excellent bending performance, good formability, softening resistance and corrosion resistance; good stress relaxation resistance.

Physical Properties *

Density	8.94	g/cm ³
Electrical conductivity @ 20°C	92	% IACS
Electrical conductivity @ 20°C	53	MS/m
Thermal conductivity @20°C	360	W/(m·K)
Specific heat	0.385	J/(g·K)
Modulus of elasticity	120	GPa
Poisson's ratio	0.33	
Thermal expansion coefficient**	17.6	10 ⁻⁶ /K

* Typical values at room temperature. only for reference.

** Average value between 20-300°C

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Mechanical Properties

Temper	Tensile strength		Yield strength	Hardness*	Elongation
	MPa	ksi	MPa	HV	A50 %
R325(H03)	325 - 385	47 - 56	≥ 310	100-125	≥ 2
R365(H04)	365 - 425	53 - 62	≥ 350	120-145	≥ 2
R405(H06)	405 - 450	59 - 65	≥ 395	125-150	≥ 1
R440(H08)	440 - 500	64 - 73	≥ 425	≥135	≥ 1

* For reference only

Bendability

Bending thickness: ≤ 0.5 mm, bending width: 10 mm

Temper	90° R/T		180° R/T	
	Good Way	Bad Way	Good Way	Bad Way
R325(H03)	-	-	-	-
R365(H04)	0	0	-	-
R405(H06)	0.5	0.5	-	-
R440(H08)	1	1	-	-

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

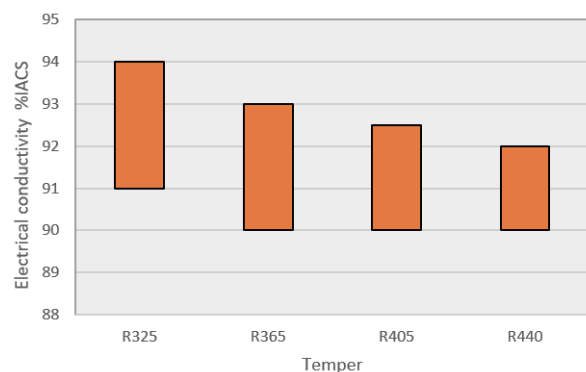
Packaging

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

Dimensions available

Strip thickness: 0.2-2 mm, Other gauges on request
Strip width from 8.5mm
Hot-dip tinned and electroplated strip available

Electrical Conductivity



Fatigue strength

Fatigue strength is defined as the maximum bending stress that a material can withstand without fracture under the action of 10000000 cycles, which is related to the state of the selected material. Generally, the fatigue strength is about 1 / 3 of the tensile strength. For the fine grain solid solution alloy, the fatigue strength can be increased to 1 / 2 of the tensile strength.