

boway 75200

Material Designation

Boway designation	boway 75200
UNS	C75200
EN	CuNi18Zn18
JIS	C7521
GB(China)	BZn18-18

Chemical Composition*

Ni	18	%
Cu	64	%
Zn	Rem.	

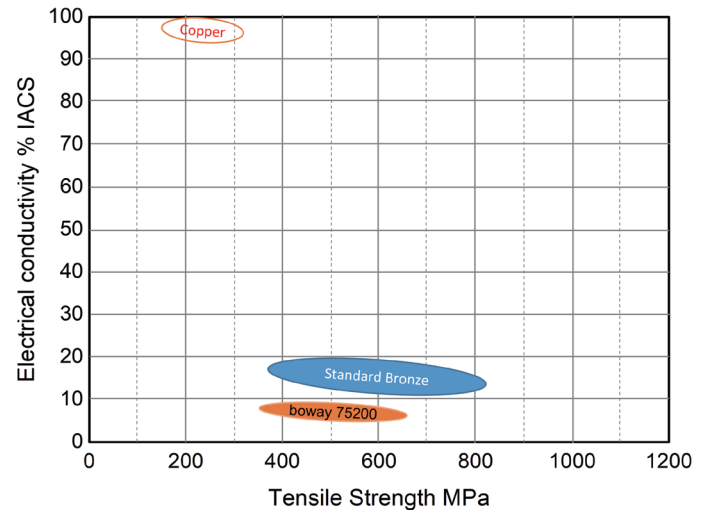
Application Target

Signal Connector	Suitable
Power Connector	Not suitable
Miniaturized Connector	Suitable
Switch / Relay	Suitable
Shielding	Very suitable

Ideal for EMI shielding, gasket etc.

Fabrication Properties

Cold forming	Very good
Machining	Less suitable
Electroplating	Very good
Hot dip tinning	Very good
Laser welding	Good
Resistance welding	Very good
Soft soldering	Very good



Characteristics

Excellent ductility combined with very good corrosion resistance in fresh water and sea water .

Very good behavior against electromagnetic interference as well as excellent stress relaxation resistance and solderability. Low sensitivity to stress corrosion cracking.

Physical Properties*

Density	8.7	g/cm ³
Electrical conductivity @ 20°C	7	% IACS
	4	MS/m
Thermal conductivity @20°C	32	W/(m·K)
Specific heat capacity	0.34	J/(g·K)
Modulus of elasticity	135	GPa
Poisson's ratio	0.33	
Coefficient of thermal expansion**	16.8	10 ⁻⁶ /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			
R375 (O)	≥ 375	≥ 55	≥ 180	90 - 120	≥ 20
R440(H/2)	440 - 570	64 - 83	≥ 250	120 - 180	—
R540(H)	540 - 640	79 - 93	≥ 420	150 - 210	—
R610(EH)	≥ 610	≥ 89	≥ 520	≥ 185	—

*For reference only

Bendability

bending thickness: 0.08-0.2 mm, bending width: 10 mm

Temper	90° R/T		180° R/T	
	Good Way	Bad Way	Good Way	Bad Way
R375 (O)	0	0	0	0
R440(H/2)	0	1	0	2
R540(H)	1	3	2	4
R610(EH)	—	—	—	—

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

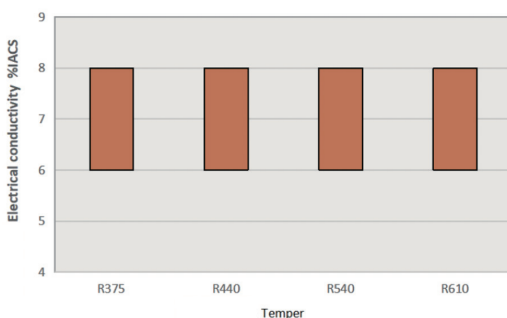
Packaging

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 0.08 - 3.0 mm, other gauges on request.
 Strip width from 8.5 mm.

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.