

boway 77000

Material Designation

Boway designation	boway 77000
UNS	C77000
EN	CuNi18Zn27
JIS	C7701
GB(China)	BZn18-26

Chemical Composition*

Ni	18	%
Cu	55	%
Zn	Rem.	

* Nominal composition

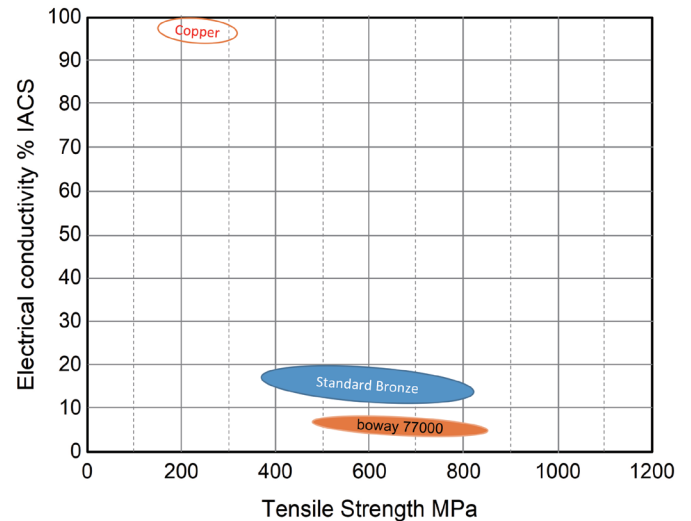
Application Target

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

Ideal for EMI shielding ,gaskets 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 of 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**	16.7	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			
R480 (H/4)	480 - 660	70 - 96	≥ 230	120 - 150	≥ 25
R540(H/2)	540 - 655	79 - 95	≥ 390	150 - 210	≥ 20
R630(H)	630 - 735	92 - 107	≥ 500	180 - 240	—
R705(EH)	705 - 805	103 - 117	≥ 550	210 - 260	—
R765(SH)	765 - 865	111 - 126	≥ 650	230 - 270	—

*For reference only

Bendability

bending thickness: 0.1-0.5 mm, bending width: 10 mm

Temper	90° R/T		180° R/T	
	Good Way	Bad Way	Good Way	Bad Way
R480 (H/4)	0	0	0	1.5
R540(H/2)	0	1.5	1.5	3
R630(H)	1.5	2	2	4
R705(EH)	2	4	3	6
R765(SH)	—	—	—	—

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

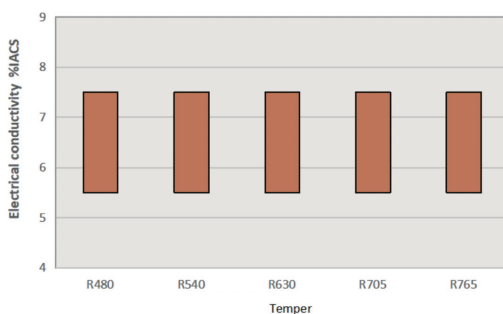
Packaging

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.

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