

boway 70250HS

Material Designation

Boway designation	boway 70250HS
UNS	C70250
EN	CuNi4SiMg
JIS	C7025
GB(China)	--

Chemical Composition*

Ni	4	%
Si	0.75	%
Mg	0.15	%
Cu	Rem.	

* Nominal composition

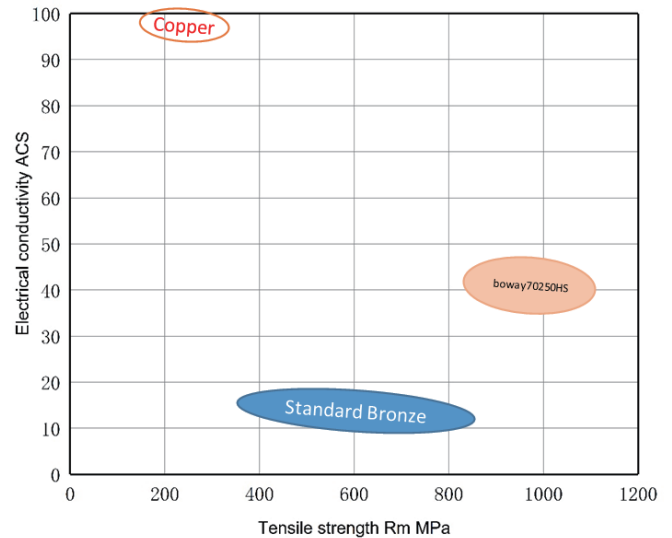
Application Target

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

Ideal for miniaturized connector ,especially CPU socket ,relay and SIM card connector etc.

Fabrication Properties

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



Characteristics

Ultra high strength combined with good electrical conductivity.
Very good stress relaxation resistance.

Physical Properties*

Density	8.8	g/cm ³
Electrical conductivity @ 20°C	42	% IACS
	24	MS/m
Thermal conductivity @20°C	190	W/(m·K)
Specific heat capacity	0.399	J/(g·K)
Modulus of elasticity	130	GPa
Poisson's ratio	0.33	
Coefficient of thermal expansion**	17.6	10 ⁻⁶ /K

* Typical values at room temperature for reference.

** average value between 20-300°C

boway 70250HS

Mechanical Properties

Temper	Tensile strength		Yield strength	Hardness*	Elongation
	MPa	ksi			
R840(TM08)	840 - 920	122 - 134	≥ 810	260 - 300	≥ 1
R900(TM10)	900 - 1000	131 - 146	≥ 880	270 - 330	≥ 1
R1000(TM12)	> 1000	> 145	≥ 950	300 - 350	--

*For reference only

Bendability

Thickness range: ≤ 0.5 mm , bending width: 10 mm

Temper	90° R/T		180° R/T	
	Good Way	Bad Way	Good Way	Bad Way
R840(TM08)	2.0	2.5	--	--
R900(TM10)	3.5	4.0	--	--
R1000(TM12)	--	--	--	--

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

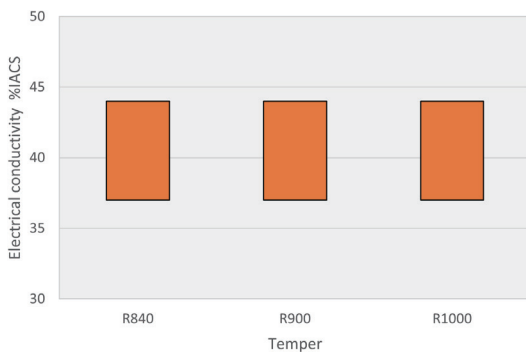
Packaging

Standard coils with outside diameter up to 1200 mm,
 Traverse-wound coils with drum weight up to 500 kg.
 Multiple-coil up to 3 tons.

Dimensions available

Strip thickness 0.07 - 0.25 mm, other gauges on request.
 Strip width from 8.5 mm.
 Hot-dip tinned and electroplated 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.

This datasheet is for your general information only and is not subject to revision. No claim can be derived from it unless there is evidence of intent or gross negligence. The data given is to our best knowledge, no warranty can be derived from the data provided. The given Info may not replace the customers own tests.