



# Specification Sheet

Last Modified: May 27, 2017

## C73500

Nickel Silver

### Chemical Composition

(%max., unless shown as range or min.)

	Cu <sup>(1)</sup>	Fe	Pb	Mn	Ni <sup>(2)</sup>	Zn
Min./Max.	70.5-73.5	0.25	0.09	0.5	16.5-19.5	Rem.
Nominal	72	-	-	-	18	10

(1) Cu value includes Ag.

(2) Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.5% min.

### Applicable Specifications

Product	Specification
Bar	ASTM B122
Plate	ASTM B122
Sheet	ASTM B122
Strip	ASTM B122

### Common Fabrication Processes

No information available.

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**Millard Wire & Specialty Strip Co.**

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## Fabrication Properties

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Not Recommended
Spot Weld	Good
Seam Weld	Poor
Butt Weld	Good
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Poor
Machinability Rating	20

## Thermal Properties

Treatment	Temp./Time – US	Temp./Time – SI
Stress Temperature		
Solution Minimum		
Solution Maximum		
Solution Time		
Solution Medium	None	
Precipitation Value		
Precipitation Time		
Precipitation Medium	None	
Annealing Minimum	1000	538
Annealing Maximum	1500	816
Annealing Time		
Hot Works Minimum		
Hot Works Maximum		



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## Mechanical Properties (Measured at Room Temperature, 68°F (20°C))

Temper	Section Size	Cold Work	Typ/Min	Temp	Tensile Strength	Yield Strength (0.5% ext. under load)	Yield Strength (0.2% offset)	Yield Strength (0.05% offset)	EI	Rockwell Hardness				Vickers Hardness	Brinell Hardness			Shear Strength	Fatigue Strength	Izod Impact Strength
										B	C	F	30T		500	500	3000			
	in.	%		F	ksi	ksi	ksi	ksi	%								ksi	ksi	ft-lb	
	mm.			C	MPa	MPa	MPa	MPa									MPa	MPa	J	
<b>Flat Products</b>																				
H04	0	0	TYP	68	78	-	74	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	538	-	510	-	-	-	-	-	-	-	-	-	-	-	0	
H02	0	0	TYP	68	69	-	58	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	476	-	400	-	-	-	-	-	-	-	-	-	-	-	0	
H06	0	0	TYP	68	84	-	81	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	579	-	558	-	-	-	-	-	-	-	-	-	-	-	0	
OS015	0	0	TYP	68	57	-	27	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	393	-	186	-	-	-	-	-	-	-	-	-	-	-	0	
OS035	0	0	TYP	68	55	-	26	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	379	-	179	-	-	-	-	-	-	-	-	-	-	-	0	
H01	0	0	TYP	68	63	-	48	-	-	-	-	-	-	-	-	-	-	-	0	
	0			20	434	-	331	-	-	-	-	-	-	-	-	-	-	-	0	

\*Fatigue Strength: 100 x 10<sup>6</sup> cycles, unless indicated as [N]X 10<sup>6</sup>.

## Physical Properties

Property	US Customary	Metric
Melting Point - Liquidus	2075 F	1135 C
Melting Point - Solidus	1995 F	1090 C
Density	0.318 lb/in <sup>3</sup> at 68 F	8.8 gm/cm <sup>3</sup> @ 20 C
Specific Gravity	8.8	8.8
Electrical Resistivity	160 ohms-cmil/ft @ 68 F	26.3 microhm-cm @ 20 C
Electrical Conductivity	6.50 %IACS @ 68 F	0.038 MegaSiemens/cm @ 20 C
Thermal Conductivity	21 Btu · ft/(hr · ft <sup>2</sup> · °F) at 68F	36.4 W/m · °K at 20 C
Coefficient of Thermal Expansion	8.90 · 10 <sup>-6</sup> per °F (68-572 F)	16.0 · 10 <sup>-6</sup> per °C (20-300 C)
Modulus of Elasticity in Tension	18000 ksi	124100 MPa
Modulus of Rigidity	6800 ksi	46880 MPa

## Tempers Most Commonly Used

Other	
FLATPR	H04



### Typical Uses

#### Consumer

Medallions, Coinage, Flatware, Zippers, Fashion jewelry, Hollowware, Optical goods

#### Hardware

Name plates

### Casting Characteristics

No casting characteristics for this alloy.