



## C26000

Cartridge Brass, 70%

### Chemical Composition

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

	Cu	Fe	Pb	Zn
Min./Max.	68.5-71.5	0.05	0.07	Rem.
Nominal	70	-	-	30

Note: Cu + Sum of Named Elements, 99.7% min.

### Applicable Specifications

Product	Specification
Bar	ASTM B36, B19 SAE J463, J461
Brazing Filler Metal	FEDERAL QQ-B-650
Cups, Cartridge Case	ASTM B129 MILITARY MIL-C-10375
Disk	ASTM B19
Plate	AMS 4507, 4505 ASTM B19, B36
Rod	SAE J461, J463
Sheet	AMS 4507, 4508, 4505 ASTM B19, B36 SAE J463, J461
Shim Stock, Laminated	MILITARY MIL-S-22499
Strip	AMS 4507, 4505 ASTM B36, B569, B19, B888 SAE J463, J461
Tube, Seamless	ASTM B135 FEDERAL WW-T-791 MILITARY MIL-T-20219 SAE J461, J463
Tube, Welded	ASTM B587, B587
Wire	ASTM B134 SAE J463, J461

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## Millard Wire & Specialty Strip Co.

449 Warwick Industrial Drive • Warwick, RI 02886  
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## Common Fabrication Processes

No information available.

## Fabrication Properties

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Good
Coated Metal Arc Welding	Not Recommended
Spot Weld	Fair
Seam Weld	Not Recommended
Butt Weld	Good
Capacity for Being Cold Worked	Excellent
Capacity for Being Hot Formed	Fair
Machinability Rating	30

## 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	800	427
Annealing Maximum	1400	761
Annealing Time		
Hot Works Minimum	1350	733
Hot Works Maximum	1550	844



# C26000 Specification Sheet

## 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
					F	ksi	ksi	ksi	ksi	ksi	%	B		C	F	30T	500		500	3000	ksi			
	in. mm.	%		F C	ksi MPa	ksi MPa	ksi MPa	ksi MPa	%	B	C	F	30T	500	500	3000	ksi	ksi	ksi					
<b>Wire</b>																								
H06	0.08	0	TYP	68	124	-	-	-	4	-	-	-	-	-	-	-	-	-	-	0				
	2			20	855	-	-	-	4	-	-	-	-	-	-	-	-	-	-	0				
<b>Tube</b>																								
H80	0	35	TYP	68	78	64	-	-	8	82	-	-	73	-	-	-	-	-	-	0				
	0			20	538	441	-	-	8	82	-	-	73	-	-	-	-	-	-	0				
<b>Flat Products</b>																								
OS015	0.04	0	TYP	68	53	22	-	-	54	-	-	78	43	-	-	-	35	14	0					
	1			20	365	152	-	-	54	-	-	78	43	-	-	-	241	97	0					
H02	0.04	0	TYP	68	62	52	-	-	25	70	-	-	65	-	-	-	40	18	0					
	1			20	427	359	-	-	25	70	-	-	65	-	-	-	276	124	0					
<b>Wire</b>																								
H00	0.08	0	TYP	68	58	-	-	-	35	-	-	-	-	-	-	-	38	-	0					
	2			20	400	-	-	-	35	-	-	-	-	-	-	-	262	-	0					
H01	0.08	0	TYP	68	70	-	-	-	20	-	-	-	-	-	-	-	-	-	0					
	2			20	483	-	-	-	20	-	-	-	-	-	-	-	-	-	0					
<b>Flat Products</b>																								
H06	0.04	0	TYP	68	86	65	-	-	5	88	-	-	76	-	-	-	46	-	0					
	1			20	593	448	-	-	5	88	-	-	76	-	-	-	317	-	0					
OS100	0.04	0	TYP	68	44	11	-	-	66	-	-	54	11	-	-	-	-	13	0					
	1			20	303	76	-	-	66	-	-	54	11	-	-	-	-	90	0					
OS035	0.04	0	TYP	68	49	17	-	-	57	-	-	68	31	-	-	-	34	14	0					
	1			20	338	117	-	-	57	-	-	68	31	-	-	-	234	97	0					
H04	0.04	0	TYP	68	76	63	-	-	8	82	-	-	73	-	-	-	44	21	0					
	1			20	524	434	-	-	8	82	-	-	73	-	-	-	303	145	0					
<b>Wire</b>																								
OS015	0.08	0	TYP	68	54	-	-	-	56	-	-	-	-	-	-	-	-	-	0					
	2			20	372	-	-	-	56	-	-	-	-	-	-	-	-	-	0					
OS050	0.08	0	TYP	68	48	-	-	-	64	-	-	-	-	-	-	-	-	-	0					
	2			20	331	-	-	-	64	-	-	-	-	-	-	-	-	-	0					
<b>Flat Products</b>																								
H08	0.04	0	TYP	68	94	65	-	-	3	91	-	-	77	-	-	-	48	23	0					
	1			20	648	448	-	-	3	91	-	-	77	-	-	-	331	159	0					
<b>Rod</b>																								
OS050	1	0	TYP	68	48	16	-	-	65	-	-	65	-	-	-	-	34	-	0					
	25.4			20	331	110	-	-	65	-	-	65	-	-	-	-	234	-	0					
H00	1	6	TYP	68	55	40	-	-	48	60	-	-	-	-	-	-	36	-	0					
	25.4			20	379	276	-	-	48	60	-	-	-	-	-	-	248	-	0					
<b>Wire</b>																								
H08	0.08	0	TYP	68	130	-	-	-	3	-	-	-	-	-	-	-	60	22	0					
	2			20	896	-	-	-	3	-	-	-	-	-	-	-	414	152	0					
<b>Tube</b>																								
OS025	0	0	TYP	68	52	20	-	-	55	-	-	75	40	-	-	-	-	-	0					
	0			20	359	138	-	-	55	-	-	75	40	-	-	-	-	-	0					
<b>Flat Products</b>																								
OS070	0.04	0	TYP	68	46	14	-	-	65	-	-	58	15	-	-	-	32	13	0					
	1			20	317	97	-	-	65	-	-	58	15	-	-	-	221	90	0					
<b>Rod</b>																								
H02	1	20	TYP	68	70	52	-	-	30	80	-	-	-	-	-	-	42	22	0					
	25.4			20	483	359	-	-	30	80	-	-	-	-	-	-	290	152	0					
<b>Wire</b>																								
OS035	0.08	0	TYP	68	50	-	-	-	60	-	-	-	-	-	-	-	34	-	0					
	2			20	345	-	-	-	60	-	-	-	-	-	-	-	234	-	0					
<b>Flat Products</b>																								
OS050	0.04	0	TYP	68	47	15	-	-	62	-	-	64	26	-	-	-	-	-	0					
	1			20	324	103	-	-	62	-	-	64	26	-	-	-	-	-	0					

\*Fatigue Strength:  $100 \times 10^6$  cycles, unless indicated as [N]X  $10^6$ .



## Mechanical Properties (cont'd)

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. mm.	%		F C	ksi MPa	ksi MPa	ksi MPa	ksi MPa	%	B	C	F	30T	500	500	3000	ksi MPa	ksi MPa	ft-lb J	
<b>Wire</b>																				
OS025	0.08	0	TYP	68	52	-	-	-	58	-	-	-	-	-	-	-	-	-	0	
	2			20	359	-	-	-	58	-	-	-	-	-	-	-	-	-	0	
<b>Tube</b>																				
OS050	0	0	TYP	68	47	15	-	-	65	-	-	64	26	-	-	-	-	-	0	
	0			20	324	103	-	-	65	-	-	64	26	-	-	-	-	-	0	
<b>Flat Products</b>																				
H10	0.04	0	TYP	68	99	65	-	-	3	93	-	-	78	-	-	-	-	-	0	
	1			20	683	448	-	-	3	93	-	-	78	-	-	-	-	-	0	
H01	0.04	0	TYP	68	54	40	-	-	43	55	-	-	54	-	-	-	36	-	0	
	1			20	372	276	-	-	43	55	-	-	54	-	-	-	248	-	0	
OS025	0.04	0	TYP	68	51	19	-	-	55	-	-	72	36	-	-	-	-	-	0	
	1			20	352	131	-	-	55	-	-	72	36	-	-	-	-	-	0	

## Physical Properties

Property	US Customary	Metric
Melting Point - Liquidus	1750° F	954° C
Melting Point - Solidus	1680° F	916° C
Density	0.308 lb/in <sup>3</sup> at 68° F	8.53 gm/cm <sup>3</sup> @ 20° C
Specific Gravity	8.53	8.53
Electrical Resistivity	37 ohms-cmil/ft @ 68 F	6.15 microhm-cm @ 20° C
Electrical Conductivity	28 %IACS @ 68° F	0.164 MegaSiemens/cm @ 20° C
Thermal Conductivity	70 Btu·ft/(hr·ft <sup>2</sup> ·°F) at 68° F	121.2 W/m·°K at 20° C
Coefficient of Thermal Expansion	11.10·10 <sup>-6</sup> per °F (68-572° F)	20.0·10 <sup>-6</sup> per °C (20-300° C)
Specific Heat Capacity	0.090 Btu/lb/°F at 68° F	377.1 J/kg·°K at 293° K
Modulus of Elasticity in Tension	16000 ksi	110000 MPa
Modulus of Rigidity	6000 ksi	41370 MPa

## Temper Most Commonly Used

Flat Products	
BAR, ROLLED	H02, OS070, OS100
SHEET	H01, H02, OS035, OS050, OS070
STRIP, ROLLED	H01, H02, H04, H06, H08, H10, OS015, OS025, OS035, OS050, OS070, OS100
WIRE, DRAWN	H02, OS050
WIRE, ROLLED	H02, H04, H06, OS035, OS050, OS070, OS100

Other	
SHAPES	M30
TUBE	H58, H80, OS025, OS050
WIRE	H00, H01, H06, H08, OS015, OS025, OS035, OS050



## Typical Uses

### Architecture

Odometer Contacts, Heater Cores, Thermostats, Electrical Connectors, Radiator Cores, Radiator Tube, Radiator Tanks, Tanks

### Builders Hardware

Locks, Push Plates, Finish Hardware, Kick Plates, Decorative Hardware, Door Knobs, Hinges

### Consumer

Snaps, Planters, Fireplace Screens, Etched Articles, Bird Cages, Coinage, Chain Links, Pen/Pencil Inserts and Clips, Syringe Parts, Watch Parts, Costume Jewelry, Buttons, Shells – Electrical Sockets, Lamps

### Electrical

Terminal Connectors, Flashlight Shells, Lamp Fixtures, Reflectors, Screw Shells

### Fasteners

Pins, Rivets, Fasteners, Grommets, Eyelets, Screws

### Industrial

Air Pressure Conveyer Systems, Sound Proofing Equipment, Springs, Chain, Bead Chain, Tubing for Instruments and Machines, Heat Exchangers, Pump Cylinders, Wire Screens, Pumps, Liners, Power Cylinders

### Ordnance

Ammunition Cartridge Cases, Mechanical Housings for Lighters, Shells – Mechanical Housings for Ammunition, Ammunition

### Other

Stencils, Washers

### Plumbing

Fittings, Bathroom Fixtures, Plumbing Accessories, Faucet Escutcheons, Traps, Plumbing Brass Goods



## Casting Characteristics

No casting characteristics available for this alloy.