



Specification Sheet

Last Modified: May 16, 2017

C24000

Low Brass, 80%

Chemical Composition

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

	Cu	Fe	Pb	Zn
Min./Max.	78.5-81.5	0.05	0.05	Rem.
Nominal	80	-	-	20

Note: Cu + Sum of Named Elements, 99.8% min.

Applicable Specifications

Product	Specification
Bar	ASTM B36
Brazing Filler Metal	FEDERAL QQ-B-650
Plate	ASTM B36
Sheet	ASTM B36 SAE J463, J461
Strip	ASTM B36 SAE J461, J463
Wire	ASTM B134

Common Fabrication Processes

Blanking, Drawing, Etching, Forming and Bending, Heading and Upsetting, Piercing and Punching, Roll Threading and Knurling, Shearing, Spinning, Squeezing and Swaging, Stamping

Millard Wire & Specialty Strip Co.

449 Warwick Industrial Drive • Warwick, RI 02886

Phone: (401) 737-9330 • Fax: (401) 737-9340



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	1300	705
Annealing Time		
Hot Works Minimum	1500	816
Hot Works Maximum	1650	900



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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
					F	ksi	ksi	ksi		%	B	C	F	30T	500	500	3000	ksi	ksi
	in.	%		F	ksi	ksi	ksi	ksi	%	B	C	F	30T	500	500	3000	ksi	ksi	ft-lb
	mm.			C	MPa	MPa	MPa	MPa									MPa	MPa	J
Wire																			
H06	0.08	0	TYP	68	116	-	-	-	4	-	-	-	-	-	-	-	-	-	0
	2			20	800	-	-	-	4	-	-	-	-	-	-	-	-	-	0
Flat Products																			
OS015	0.04	0	TYP	68	50	20	-	-	46	-	-	75	42	-	-	-	33	-	0
	1			20	345	138	-	-	46	-	-	75	42	-	-	-	228	-	0
H02	0.04	0	TYP	68	61	50	-	-	18	70	-	-	64	-	-	-	39	-	0
	1			20	421	345	-	-	18	70	-	-	64	-	-	-	269	-	0
Wire																			
H00	0.08	0	TYP	68	56	-	-	-	27	-	-	-	-	-	-	-	37	-	0
	2			20	386	-	-	-	27	-	-	-	-	-	-	-	255	-	0
H01	0.08	0	TYP	68	68	-	-	-	12	-	-	-	-	-	-	-	42	-	0
	2			20	469	-	-	-	12	-	-	-	-	-	-	-	290	-	0
Flat Products																			
OS035	0.04	0	TYP	68	46	15	-	-	48	-	-	66	28	-	-	-	-	-	0
	1			20	317	103	-	-	48	-	-	66	28	-	-	-	-	-	0
H04	0.04	0	TYP	68	74	59	-	-	7	82	-	-	71	-	-	-	43	-	0
	1			20	510	407	-	-	7	82	-	-	71	-	-	-	296	-	0
Wire																			
OS015	0.08	0	TYP	68	50	-	-	-	47	-	-	-	-	-	-	-	33	-	0
	2			20	345	-	-	-	47	-	-	-	-	-	-	-	228	-	0
OS050	0.08	0	TYP	68	44	-	-	-	55	-	-	-	-	-	-	-	32	-	0
	2			20	303	-	-	-	55	-	-	-	-	-	-	-	221	-	0
Flat Products																			
H08	0.04	0	TYP	68	91	65	-	-	3	91	-	-	77	-	-	-	48	24	0
	1			20	627	448	-	-	3	91	-	-	77	-	-	-	331	165	0
Wire																			
H08	0.08	0	TYP	68	125	-	-	-	3	-	-	-	-	-	-	-	60	26	0
	2			20	862	-	-	-	3	-	-	-	-	-	-	-	414	179	0
Flat Products																			
OS070	0.04	0	TYP	68	42	12	-	-	52	-	-	57	8	-	-	-	-	-	0
	1			20	290	83	-	-	52	-	-	57	8	-	-	-	-	-	0
Wire																			
H04	0.08	0	TYP	68	107	-	-	-	5	-	-	-	-	-	-	-	53	23	0
	2			20	738	-	-	-	5	-	-	-	-	-	-	-	365	159	0
OS035	0.08	0	TYP	68	46	-	-	-	50	-	-	-	-	-	-	-	-	-	0
	2			20	317	-	-	-	50	-	-	-	-	-	-	-	-	-	0
Flat Products																			
OS050	0.04	0	TYP	68	44	14	-	-	50	-	-	61	16	-	-	-	32	-	0
	1			20	303	97	-	-	50	-	-	61	16	-	-	-	221	-	0
Wire																			
H02	0.08	0	TYP	68	82	-	-	-	8	-	-	-	-	-	-	-	47	-	0
	2			20	565	-	-	-	8	-	-	-	-	-	-	-	324	-	0
Flat Products																			
OS025	0.04	0	TYP	68	48	17	-	-	47	-	-	69	32	-	-	-	-	-	0
	1			20	331	117	-	-	47	-	-	69	32	-	-	-	-	-	0
H01	0.04	0	TYP	68	53	40	-	-	30	55	-	-	54	-	-	-	36	-	0
	1			20	365	276	-	-	30	55	-	-	54	-	-	-	248	-	0

*Fatigue Strength: 100 x 10⁶ cycles, unless indicated as [N]X 10⁶.



Physical Properties

Property	US Customary	Metric
Melting Point - Liquidus	1830 F	999 C
Melting Point - Solidus	1770 F	966 C
Density	0.313 lb/in ³ at 68 F	8.66 gm/cm ³ @ 20 C
Specific Gravity	8.67	8.67
Electrical Resistivity	32.40 ohms-cmil/ft @ 68 F	5.39 microhm-cm @ 20 C
Electrical Conductivity	32 %IACS @ 68 F	0.187 MegaSiemens/cm @ 20 C
Thermal Conductivity	81 Btu · ft/	hr · ft ² · oF) at 68F
Coefficient of Thermal Expansion	10.60 · 10 ⁻⁶ per oF	(68-572 F)
Specific Heat Capacity	0.090 Btu/lb/oF at 68 F	377.1 J/kg · oK at 293 K
Modulus of Elasticity in Tension	16000 ksi	110000 MPa
Modulus of Rigidity	6000 ksi	41370 MPa

Tempers Most Commonly Used

Flat Products	
STRIP, ROLLED	H01, H02, H04, H08, OS015, OS025, OS035, OS050, OS070
WIRE, ROLLED	H02, H08, OS035, OS050

Other	
WIRE	H00, H01, H02, H04, H06, H08, OS015, OS035, OS050

Typical Uses

Architecture

Spandrels, Medallions, Ornamental Components

Consumer

Clock Dials, Plaques, Musical Instrument Parts

Industrial

Pump Lines, Welding Wire, Flexible Hose,
Flexible Hose Bellows

Builders Hardware

Decorative Panels

Electrical

Battery Caps, Rotor Bars, AC Motors

Other

Tokens

Casting Characteristics

No casting characteristics available for this alloy.