



C35300

High Leaded Brass, 62%

Chemical Composition

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

	Cu ⁽¹⁾	Fe ⁽²⁾	Pb	Zn
Min./Max.	60.0-63.0	0.15	1.5-2.5	Rem.
Nominal	61.5	-	2	36.5

(1) Cu, 61.0% min. for rod.

(2) For flat products, the iron shall be .10% max.

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

Applicable Specifications

Product	Specification
Bar	ASTM B121
Plate	ASTM B121
Rod	ASTM B453
Sheet	ASTM B121
Strip	ASTM B121

Common Fabrication Processes

Blanking, Machining, Piercing and Punching, Roll Threading and Knurling, 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	Good
Oxyacetylene Welding	Not Recommended
Gas Shielded Arc Welding	Not Recommended
Coated Metal Arc Welding	Not Recommended
Spot Weld	Not Recommended
Seam Weld	Not Recommended
Butt Weld	Fair
Capacity for Being Cold Worked	Fair
Capacity for Being Hot Formed	Poor
Machinability Rating	90

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	1100	594
Annealing Time		
Hot Works Minimum		
Hot Works Maximum		



C35300 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
					ksi	ksi	ksi	ksi		%	B	C	F	30T	500	500	3000	ksi	ksi	ft-lb
	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	
Rod																				
O60	<0.50	0	SMIN	68	46	16	-	-	20	-	-	-	-	-	-	-	-	-	0	
	<12.7			20	317	110	-	-	20	-	-	-	-	-	-	-	-	-	0	
Flat Products																				
H06	0.04	0	TYP	68	85	62	-	-	5	87	-	-	74	-	-	-	45	-	0	
	1			20	586	427	-	-	5	87	-	-	74	-	-	-	310	-	0	
Rod																				
H01	1.375	0	SMIN	68	42	15	-	-	20	-	-	-	-	-	-	-	-	-	0	
	34.9			20	290	103	-	-	20	-	-	-	-	-	-	-	-	-	0	
H01	<0.50	0	SMIN	68	52	25	-	-	10	-	-	-	-	-	-	-	-	-	0	
	<12.7			20	358	172	-	-	10	-	-	-	-	-	-	-	-	-	0	
O60	1.375	0	SMIN	68	40	15	-	-	30	-	-	-	-	-	-	-	-	-	0	
	34.9			20	276	103	-	-	30	-	-	-	-	-	-	-	-	-	0	
H02	1.375	0	TYP	68	58	45	-	-	25	75	-	-	-	-	-	-	-	-	0	
	34.9			20	400	310	-	-	25	75	-	-	-	-	-	-	-	-	0	
H02	<0.50	0	SMIN	68	57	25	-	-	7	-	-	-	-	-	-	-	-	-	0	
	<12.7			20	393	172	-	-	7	-	-	-	-	-	-	-	-	-	0	
O60	0.75	0	SMIN	68	44	15	-	-	25	-	-	-	-	-	-	-	-	-	0	
	19.1			20	303	103	-	-	25	-	-	-	-	-	-	-	-	-	0	
Flat Products																				
H04	0.04	0	TYP	68	74	60	-	-	7	80	-	-	69	-	-	-	43	-	0	
	1			20	510	414	-	-	7	80	-	-	69	-	-	-	296	-	0	
H01	0.04	0	TYP	68	54	40	-	-	38	55	-	-	54	-	-	-	36	-	0	
	1			20	372	276	-	-	38	55	-	-	54	-	-	-	248	-	0	
OS035	0.04	0	TYP	68	49	17	-	-	52	-	-	68	31	-	-	-	34	-	0	
	1			20	338	117	-	-	52	-	-	68	31	-	-	-	234	-	0	
Rod																				
H02	0.75	0	SMAX	68	70	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	19.1			20	483	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
H02	<0.50	0	SMAX	68	80	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	<12.7			20	552	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
H01	1.375	0	SMAX	68	62	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	34.9			20	427	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
H01	<0.50	0	SMAX	68	65	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	<12.7			20	448	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
H01	0.75	0	SMIN	68	50	20	-	-	15	-	-	-	-	-	-	-	-	-	0	
	19.1			20	345	138	-	-	15	-	-	-	-	-	-	-	-	-	0	
H01	0.75	0	SMAX	68	62	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
	19.1			20	427	-	-	-	-	-	-	-	-	-	-	-	-	-	0	
Flat Products																				
H02	0.04	0	TYP	68	61	50	-	-	20	70	-	-	65	-	-	-	40	-	0	
	1			20	421	345	-	-	20	70	-	-	65	-	-	-	276	-	0	
Rod																				
H02	0.75	0	SMIN	68	55	25	-	-	10	-	-	-	-	-	-	-	-	-	0	
	19.1			20	378	172	-	-	10	-	-	-	-	-	-	-	-	-	0	

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

Physical Properties

Property	US Customary	Metric
Melting Point - Liquidus	1670° F	910° C
Melting Point - Solidus	1630° F	888° C
Density	0.306 lb/in ³ at 68° F	8.47 gm/cm ³ @ 20° C
Specific Gravity	8.47	8.47
Electrical Resistivity	39.90 ohms-cmil/ft @ 68° F	6.63 microhm-cm @ 20° C
Electrical Conductivity	26 %IACS @ 68° F	0.152 MegaSiemens/cm @ 20° C
Thermal Conductivity	67 Btu·ft/(hr·ft ² ·°F) at 68°F	116.0 W/m·°K at 20° C
Coefficient of Thermal Expansion	11.30·10 ⁻⁶ per °F (68-572° F)	20.3·10 ⁻⁶ per °C (20-300° C)
Modulus of Elasticity in Tension	15000 ksi	103400 MPa
Modulus of Rigidity	5600 ksi	38610 MPa

Tempers Most Commonly Used

Flat Products	
BAR, ROLLED	H02, H04
PLATE	H02
SHEET	O60
STRIP, ROLLED	H01, H02, H04, H06, O60, OS035

Other	
ROD	H01, H02, O60

Typical Uses

Builders Hardware

Drawer Pulls, Hinges, Drawer Handles

Fasteners

Nuts, Rivets, Screws

Industrial

Ratchets, Instrument Backs, Automatic Screw Machine Parts, Valve Stems, Pinions, Flare Fittings, Couplings, Bearing Cages, Channel Plate, Wheels, Gears, Adapters

Electrical

Socket Shells, Screw Shells, Reflectors, Lamp Fixtures, Flashlight Shells



Typical Uses (cont'd)

Other

Engravers Plate

Plumbing

Faucet Seats, Faucet Stems, Pipe Fittings, Plumbers Fittings, Plumbers' Brass Goods

Casting Characteristics

No casting characteristics available for this alloy.