

Alloy 353**C35300 High Leaded Brass "62%"****Chemical Composition for C35300**

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

	Cu⁽¹⁾	Fe⁽²⁾	Pb	Zn
Min./Max.	60.0-63.0	.15	1.5-2.5	Rem.
Nominal	61.5	-	2.0	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.

Temper 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

**Physical Properties
C35300 High Leaded Brass "62%"**

	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	39.9 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	67.0 Btu · ft/(hr · ft ² ·°F)at 68F	116.0 W/m · °K at 20 C
Coefficient of Thermal Expansion	11.3 · 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

Common Fabrication Processes

Blanking, Machining, Piercing and Punching, Roll Threading and Knurling, Stamping

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

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Mechanical Properties C35300 High Leaded Brass "62%"

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)	El	Rockwell Hardness	Vickers Hard.	Brinell Hard.	Shear Strength	*Fatigue Strength	Izod Impact Strength	
	in.	%		F	ksi	ksi	ksi	ksi	%	BCF ³⁰ _T	500	500	³⁰ / ₀₀	ksi	ksi	ft-lb
	mm.			C	MPa	MPa	MPa	MPa					MPa	MPa	J	

Rod

O60	<0.50	0	SMI N	68	46	16	-	-	20	-	-	-	-	-	-	0.0
	<12.7			20	317	110	-	-	20	-	-	-	-	-	-	0.0
H01	1.375	0	SMI N	68	42	15	-	-	20	-	-	-	-	-	-	0.0
	34.9			20	290	103	-	-	20	-	-	-	-	-	-	0.0
H01	<0.50	0	SMI N	68	52	25	-	-	10	-	-	-	-	-	-	0.0
	<12.7			20	358	172	-	-	10	-	-	-	-	-	-	0.0
O60	1.375	0	SMI N	68	40	15	-	-	30	-	-	-	-	-	-	0.0
	34.9			20	276	103	-	-	30	-	-	-	-	-	-	0.0
H02	1.375	0	TYP	68	58	45	-	-	25 ⁷ / ₅	-	-	-	-	-	-	0.0
	34.9			20	400	310	-	-	25 ⁷ / ₅	-	-	-	-	-	-	0.0
H02	<0.50	0	SMI N	68	57	25	-	-	7	-	-	-	-	-	-	0.0
	<12.7			20	393	172	-	-	7	-	-	-	-	-	-	0.0
O60	.75	0	SMI N	68	44	15	-	-	25	-	-	-	-	-	-	0.0
	19.1			20	303	103	-	-	25	-	-	-	-	-	-	0.0
H02	.75	0	SM AX	68	70	-	-	-	-	-	-	-	-	-	-	0.0

	19.1		20	483	-	-	-	-	-	-	-	-	0.0
H02	<0.50	0	SM AX	68	80	-	-	-	-	-	-	-	0.0
	<12.7		20	552	-	-	-	-	-	-	-	-	0.0
H01	1.375	0	SM AX	68	62	-	-	-	-	-	-	-	0.0
	34.9		20	427	-	-	-	-	-	-	-	-	0.0
H01	<0.50	0	SM AX	68	65	-	-	-	-	-	-	-	0.0
	<12.7		20	448	-	-	-	-	-	-	-	-	0.0
H01	.75	0	SMI N	68	50	20	-	-	15	-	-	-	0.0
	19.1		20	345	138	-	-	15	-	-	-	-	0.0
H01	.75	0	SM AX	68	62	-	-	-	-	-	-	-	0.0
	19.1		20	427	-	-	-	-	-	-	-	-	0.0
H02	.75	0	SMI N	68	55	25	-	-	10	-	-	-	0.0
	19.1		20	378	172	-	-	10	-	-	-	-	0.0

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

Typical Uses for C35300 High Leaded Brass "62%"

Builders Hardware: Drawer Handles, Drawer Pulls, Hinges

Consumer: Clock Plates and Nuts, Clock and Watch Parts, Bicycle Spoke Nipples, Key Blanks

Fasteners: Nuts, Screws, Rivets

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

Other: Engravers Plate

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