CDA67310

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

	Cu[1]	Al	Fe	Pb	Mn	Ni[2]	Si	Sn	Zn
Min. /Max.	61.5-63.0	.5	.4	.40-0.8	1.5-3.5	.25	.50-1.5	.3	Rem.
Nominal	60.5	-	-	1.7	2.7	-	1.0	-	34.1

(1) Cu value includes Ag.
(2) Ni value includes Co.
Note: Cu + Sum of Named Elements, 99.5% min.

Applicable Specifications
No information available.

Common Fabrication Processes
Hot Forming, Hot Pressing, Machining

Fabrication Properties

Joining Technique	Suitability
Machinability Rating	70

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)	El	Rockwell Hardness	Vickers Hard.	Brinell Hard.	Shear Strength	Fatigue Strength*	Izod Impact Strength
	in.	%		F	ksi	ksi	ksi	ksi	%	B	CF30T	500	3000	ksi	ksi	ft-lb
	mm.			C	MPa	MPa	MPa	MPa						MPa	MPa	J
Bar															
H50	<1.00	0	min	68	65	40	-	-	1180	-	-	-	-	-	-	0.0
	<25.4			20	448	276	-	-	1180	-	-	-	-	-	-	0.0

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

Physical Properties

	US Customary	Metric
Melting Point - Liquidus	1605 F	874 C
Density	.30 lb/in^3 at 68 F	8.3 gm/cm^3 @ 20 C
Specific Gravity	8.30	8.3
Electrical Conductivity	22 %IACS @ 68 F	0.13 MegaSiemens/cm @ 20 C
Thermal Conductivity	55 Btu · ft/(hr · ft2·°F)at 68F	95.0 W/m · °K at 20 C
Coefficient of Thermal Expansion	11 ·10^{-6} per °F (68-572 F)	19.0 ·10^{-6} per °C (20-300 C)
Modulus of Elasticity in Tension	17000 ksi	117200 MPa

Tempers Most Commonly Used

Other	
BAR	H50
FORGS	T
ROD	H50

Typical Uses

Fasteners
Fasteners, Lead Screw Nuts

Industrial
Clutch Bearings, Shaft Bushings, Propeller Shafts, Sleeve Bearings, Thrust Bearings, Pump Parts, Seal Rings, Spindles, Idler Pins, Drive Shafts, Piston Heads, Bearings, Bushings, Bearings, Pins, Wear Plates, Gears and Cams

Marine
Hardware, Valve Seats

Other
Connecting Rods

Casting Characteristics
No casting characteristics available for this alloy.