

C63000 (Aluminum Bronze)

US EPA Registered Antimicrobial

Chemical Composition

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

	Cu ⁽¹⁾	Al	Fe	MnNi ⁽²⁾	Si	Sn	Zn
Min./Max.	Rem.	9.0-11.0	2.0-4.0	1.5-4.0	0.25-0.5	0.20-0.30	
Nominal	82.0	10.0	3.0	-	5.0	-	-

(1) Cu value includes Ag.

(2) Ni value includes Co.

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

Mechanical Properties (measured at room temperature, 68 F (20 C))

Temper	Section Size	Cold Work	Typ/Temp	Tensile Strength	Yield	Yield	Yield	Rockwell Hardness	Vickers Hard.	Brinell Hard.	Shear Strength	Fatigue Strength*	Izod Impact Strength	
					(0.5% ext. under load)	(0.2% offset)	(0.05% offset)							
	in. mm.	%	F C	ksi MPa	ksi MPa	ksi MPa	ksi MPa	% B	CF30T	500	3000ksi MPa	ksi MPa	ft-lb J	
Rod														
M30	4	0	TYP	68	100	60	-	-	1596	-	-	62	36	0.0
	102			20	689	414	-	-	1596	-	-	427	248	0.0
Bar														
HR50	2	10	TYP	68	100	60	-	-	1596	-	-	-	-	0.0
	51			20	689	414	-	-	1596	-	-	-	-	0.0
Rod														
HR50	3	10	TYP	68	112	62	-	-	2096	-	-	65	37	0.0
	76			20	772	427	-	-	2096	-	-	448	255	0.0
Bar														
M30	3	0	TYP	68	90	50	-	-	1596	-	-	-	-	0.0
	76			20	621	345	-	-	1596	-	-	-	-	0.0
Rod														
HR50	1	10	TYP	68	118	75	-	-	1598	-	-	70	37	0.0
	25.4			20	814	517	-	-	1598	-	-	483	255	0.0
Bar														
HR50	1	10	TYP	68	110	62	-	-	1597	-	-	-	-	0.0
	25.4			20	758	427	-	-	1597	-	-	-	-	0.0
Rod														
HR50	2	10	TYP	68	115	65	-	-	1896	-	-	69	38	0.0
	51			20	793	448	-	-	1896	-	-	476	262	0.0

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

Physical Properties

<="" b="">	US Customary
Melting Point - Liquidus	1930 F
Melting Point - Solidus	1895 F
Density	0.274 lb/in ³ at 68 F
Specific Gravity	7.580
Electrical Resistivity	116 ohms-cmil/ft @ 68 F
Electrical Conductivity	7 %IACS @ 68 F
Thermal Conductivity	22.60 Btu · ft/(hr · ft ² · °F) at 68F
Coefficient of Thermal Expansion	$9 \cdot 10^{-6}$ per °F (68-572 F)
Specific Heat Capacity	0.090 Btu/lb/°F at 68 F
Modulus of Elasticity in Tension	17500 ksi
Modulus of Rigidity	6400 ksi