

CASTING THE FUTURE®

3-5 HOUR BREAK DOWN SERVICE AVAILABLE

SAND, FIRE, AND IMAGINATION.

CHART OF SPECIFICATIONS **BRASS & BRONZE STANDARD CASTING ALLOYS** CHART OF SPECIFICATIONS

SPECIFICATIONS										NOMINAL CHEMICAL COMPOSITIONS								MECHANICAL PROPERTIES												
FAMILY	1978 CDA	1981 ASTM	1981 SAE	SAE Superceded	ALLOY Identification	1973 FEDERAL	MILITARY Current	MILITARY Superceded	AMS	CU%	SN%	PB%	ZN%	NI%	FE%	AL%	OTH-ERS%	TENSILE STRENGTH		YIELD STRENGTH		ELONGATION		BRINELL HARDNESS 10MM-500 KG TYPICAL	Compression Strn P.S.I. 001" SET	IMPACT Strn Irod Ft. Lbs.	WEIGHT Lbs. per Cu. In.	Machinability free cut YS-100	REPORTED USES	
																		Min.(ksi)	Typ.(ksi)	Min.(ksi)	Typ.(ksi)	Min.(%)	Typ.(%)							
RED BRASS	C83300				131					93	1½	1½	4							32		10		35	35			.318	35	Electrical Hardware Parts
	C83600	B584-836	C83600	40	115	QQ-C-390-A-836	C-22229 Gr2		4855 B	85	5	5	5						30	37	14	17	20	30	50-65	14,000	9	.318	84	General Miscellaneous, Low-Pressure Valves & Fittings, Pumps
	C83800	B584-838	C83800		120	QQ-C-390-A-838		B-16540 GrC		83	4	6	7						29	35	12	16	15	25	50-60	11,500		.312	90	General Free Machining Alloy, Low Pressure Fittings, Hardware
SEMI RED BRASS	C84400	B584-844			123	QQ-C-390-A-844		B 11553-11 B 18343		81	3	7	9						29	34	13	15	18	26	50-60		6-10	.314	90	Plumbing fittings, Faucets, Hardware & Ornamental Castings
	C84800	B584-848			130	QQ-C-390-A-848				76	3	6	15						25	36	12	14	15	30	50-60	12,800		.310	90	Plumbing Fittings, Faucets, Stops & Wastes, Hardware
YELLOW BRASS	C85200	B584-852	C85200		400	QQ-C-390-A-852		B-17668 Gr2		72	1	3	24						35	38	12	13	25	35	40-50	8,000		.305	80	Plumbing Fixtures & Fittings, Andirons & Ornamental Castings
	C85400	B584-854	C85400	41	403	QQ-C-390-A-854		B-17668 Gr1		67	1	3	29						30	34	11	12	20	35	40-60	9,000		.305	80	Plumbing, Furniture, Hardware & Ornamental Fittings
	C85700	B584-857			405-2	QQ-C-390-A-857	C-15345 Gr3	B-17511A GrA		63	1	1	34.7			.3			40	50	14	18	15	40	75			.304	80	Plumbers Flanges, Fittings, Ornamental, Hardware & Ship Trim
MANGANESE BRONZE	C86200	B584-862	C86200	430A	423	QQ-C-390-A-862	C-22229 Gr9	B-16522 Gr2		64 *			26 Rem		3	4	3	90	95	45	48	18	20	170 ■ 195 ■	50,000		.288	30	Brackets, Shafts, Gears & Structural Parts	
	C86300	B584-863	C86300	430B	424	QQ-C-390-A-863	C-22229 Gr8	B-16522 Gr1	4862B	63 *			25 Rem		3	6	3	110	119	60	83	12	18	225 ■	60,000	15	.283	8	Screw Down Nuts, Slow-speed Heavy Load Bearings, Gears, Gibs & Cams	
	C86500	B584-865	C86500	43	421	QQ-C-390-A-865	C-22229 Gr7	B-16443 Gr1	4860A	58	.5		40		1	1	MN-.25	65	71	25	28	20	30	130 ■	24,000	20-40	.301	26	Strength Appls, Propellers for Salt & Fresh Water, Machinery Parts substituting for Steel & Malleable Iron	
COPPER – SILICON	C87200	B584-872	C87200		500	QQ-C-390-A-872	C-22229 Gr4	C 20152 Gr2		92 or 95 Rem.	1 Max		5 Max	5 Max	2.5 Max	1.5 Max	Si 4	45	55	18	25	20	30	85			.302	40	Corrosion Brazing & Welding Applications Substitute for Tin-Zinc Bronzes	
	C87500	B584-875	C87500		500	QQ-C-390-A-875		C 20152 Gr1		82 Rem.		5 Max	14				Si 4	60	67	24	30	16	21	120 ■ 135 ■			.299	50	Corrosion Brazing & Welding Applications Substitute for Tin-zinc Bronzes	
TIN BRONZE	C90300	B584-903	C90300	620	225	QQ-C-390-A-903	C-22229 Gr1	M 16576 Gr A		88	8		4					40	45	18	21	20	30	60-75	13,000		.318	30	Bearings & Bushings Pump Impellers, Piston Rings, Pump Bodies, Valves, Steam Fittings, Gears	
	C90500	B584-905	C90500	62	210	QQ-C-390-A-905		B 11553B-16	4845D	88	10	.3 Max.	2					40	45	18	22	20	25	75	13,000	10-14	.315	30	Bearings & Bushings Pump Impellers, Piston Rings, Pump Bodies, Valves, Steam Fittings, Gears	
	C90700	B505-907	C90700	65	205					89	11	.5 Max.	5 Max					35	44	18	22	10	20	80	13,000	10-14	.317	20	Worm Wheels & Gears, Bearings for Heavy Loads & Relatively Low Speeds	
LEADED TIN BRONZE	C92200	B584-922	C92200	622	245	QQ-C-390-A-922	C-15345-9	B-16541		88	6	1.5	4.5					34	40	16	20	22	30	60-72	12,000	11-18	.312	42	Medium-pressure Hydraulic & Steam to 550 ° F, Marine & Ornamental Castings	
	C92300	B584-923	C92300	621	230	QQ-C-390-A-923	C-15345 Gr 10	B-16540 Gr A or B		87	8	1 Max.	4					36	40	16	20	18	25	60-75	9,000	12	.317	42	High-pressure Hydraulic & Steam Equipment, Structural Castings	
	C92600				215				4846A	87	10	1	2					40	44	18	20	20	30	65-80	12,000	7	.315	40	Lead Screw Nuts, Heavy-Duty Bearings, Pump Pistons	
	C92700	B505-927	C92700	63	206					88	10	2	.7 Max.					35	42		21	10	20	77	12,000	7-10	.317	45	Lead Screw Nuts, Heavy-duty Bearings Pump Pistons	
HIGH LEAD TIN BRONZE	C93200	B584-932	C93200	660	315	QQ-C-390-A-932	C-15345 Gr 12	B-16261 Gr VI		83	7	7	3					30	35	14	18	12	20	60-70		6	.322	70	General Purpose Bushings, Washers, Non-pressure Applications	
	C93400				310	QQ-C-390-A-934	C-22225 Gr 3	B-16261 Gr II		84	8	8	.7 Max					25	32		16	8	20	55-65		5	.320	70	Bearings & Bushings	
	C93500	B584-935	C93500	66	326	QQ-C-390-A-935		B 11553(8)		85	5	9	1	.5 Max.				25	32	12	16	8	20	55-65	13,000		.320	70	High Speed, Light Load Bushings Mild Acid Applications	
	C93700	B584-937	C93700	64	305	QQ-C-390-A-937		B 11553(12)	4842A	80	10	10		.7 Max.				25	35	12	18	8	20	55-70	13,000	5	.320	80	High Speed, Heavy-pressure Bushings, Acid-resisting to Sulphite Fluids	
	C93800	B584-938	C93800	67	319	QQ-C-390-A-938		B-16261 Gr IV		78	7	15		.75 Max.				25	30	14	16	10	18	50-60	12,000	5	.334	80	Low Friction, Moderate Pressure Bushings, Railroad Applications, Acid Resisting	
	C94300	B584-943	C94300		322	QQ-C-390-A-943		B-16261 Gr V	4840A	70	5	25		.7 Max.				21	27		13	7	10	42-55	11,000	5	.336	80	High Speed, Light to Medium Pressure Bushings, Railroad & Soft Metal Applications	
ALUMINUM BRONZE	C95200	B148-952	C95200	68A	415A	QQ-C-390-A-952	C-22229 Gr5	B-16033 Gr1		88					3	9		65	80	25	27	20	35	110 ■ 140 ■	27,000	35	.276	50	Gun Mountings & Slides, Landing Gear Parts, Pickling Tank & Mild Alkali Appls., Marine Engine & Propellers	
	C95300	B148-953	C95300	68B	415B	QQ-C-390-A-953	C-11886-22	B-16033 Gr 2		89					1	10		65	75	25	27	20	25	140 ■	20,000	20	.272	55	Gears, Cams, Stripper Nuts, Slippers, High Temperature Applications, Mining Machine Parts	
	C95400	B148-954	C95400		415C	QQ-C-390-A-954	C-15345 Gr13	B-16033 Gr3	4870B 4872B	85					4	11		75 ■	85 ■	30 ■	35 ■	12 ■	18 ■	140 ■ 170 ■		14	.269	60	Spur & Low-speed, Heavily Loaded Worm Gears, Nuts, Pump & Landing Gear Parts	
	C95500	B148-955	C95500		415D	QQ-C-390-A-955	C-22229-6	B-16033 Gr4	4880	81				4	4	11		90 ■	100 ■	40 ■	44	6 ■	12 ■	180 ■ 200 ■		13	.272	50	Used under extreme conditions such as Tank Gun Recoil Mechanisms & Landing Gear Parts	
	C95800	B148-958			415D	QQ-C-390-A-958	B-21230 Gr1 B 24480	B-23921		81				5	4	9	MN-1	85	95	35	38	18	25	150 ■ 170 ■		20	.276	50	Propellor Hub, Blades & Other Parts – Including Valves, in Contact With Sea Water	
COPPER NICKEL	C96200	B369-962	C96200				C-20159 Gr2			88.6				10	1.4			45	49	25	29	20	36	90-100			.323	10	Component Parts of Items Being Used For Sea Water Corrosion Resistance	
	C96400	B369-964				QQ-C-390-A-964	C-20159 Gr1			69.1				30	.9			60	68	32	37	20	28	120 ■ 140 ■			.323	20	Valves, Pump Bodies, Flanges, Elbows Being Used for Sea Water Corrosion Resistance	
NICKEL SILVER	C97300	B584-973			410		C-15345 Gr7			56	2	10	20	12				30	35	15	17	8	20	50-60			.321	70	Hardware, Valves, Statuary & Ornamental Castings	
	C97600	B584-976			412			C-17112		64	4	4	8	20				30	40	17	24	8	20	75-90			.321	70	Marine Furniture, Hardware & Ornamental Castings	
	C97800	B584-978			413					66	5	2	2	25				45	55	22	30	15	16	120 ■ 150			.320	60	Dairy & Food Processing Fittings, White Ornamental & Hardware	

★ Chemicals may be varied to yield mechanical properties
■ Brinell 3000 Kg Load
● Mechanical properties & specifications will vary when centrifugal cast
▲ ksi indicates thousands pounds per square inch

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SOUTH BAY BRONZE/ALUMINUM FOUNDRY INC.

NO TOOLING CHARGE ON BUSHING & PLATE STOCK

TYPE I STATIC (SAND) TYPE II CENTRIFUGAL TYPE III CONTINUOUS

SAN JOSE, CALIFORNIA

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