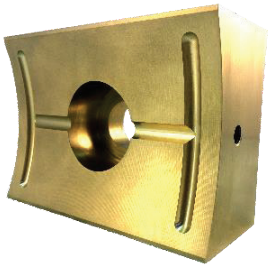
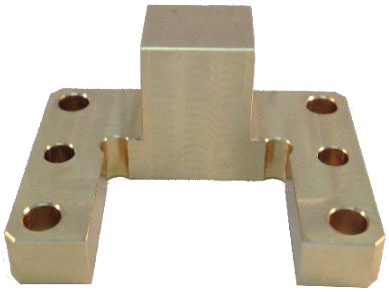
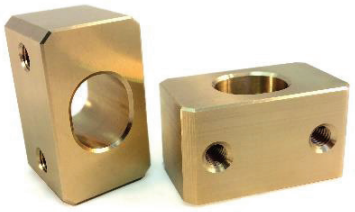
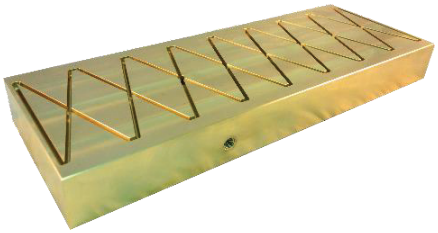
National Bronze MFG.

SINCE 1911





ISO 9001:2015 CERTIFIED

Tel: 800 875 3558 **Fax: 586 791 9044**

Email: sales@nationalbronze.com

www.nationalbronze.com

Specifications					Chemical Composition								Mechanical Properties							
													Tensile		Yield		Elongation			
CDA/UNS	ASTM	SAE	Other names	AMS	Cu	Sn	Pb	Zn	Ni	Fe	Al		Min (ksi)	Typ (ksi)	Min (ksi)	Typ (ksi)	Min (ksi)	Typ (ksi)	BHN/ Rockwell	Machin-ability
Wrought Products																				
C11000	B133,B187	J461	ETP Copper	4500	99.9									50		45		12	B40	20
C17200	B196		Berrylium Copper	4650	98								165	200	145	160	6	4	C38	20
C17510	B441	J461	Berrylium Copper		97.8				2		0.2			115		100		10	95	40
C18000			Berrylium Free		99.5									90		70		14	90	
C18200			Chromium Copper		99.1					0.1				59		55		13	B70	20
C26000	B36		Cartridge Brass, 70/30	4505	70			30						48		16		65	B55	30
C36000	B16		Free Machining	4610	61.5		3	35.5						60		43		25	65	100
C36500	B171		Leaded Muntz Metal		58		0.3							54		20		45	F80	60
C46400	B21,B171		Naval Brass	4611	60.0	0.75		39.2						55		25		50	B55	30
C51000	B139	J461	Phosphor Bronze 5%A	4510	94.8	5	0.2							60		N/A		15	N/A	20
C54400	B139	J461	Phosphor Bronze B-2	4520	88	4	4	4						55		N/A		12	N/A	80
C61400	B150	J463	Aluminum Bronze D		90.5					2.5	6.5			80		51		35	180	20
C63000	B150, B171		Nickel Aluminum Bronze	4640	80				5	3.5	10			118		75		15	228/B98	30
C63020	B150		Nickel Aluminum Bronze	4590	74		0.3			5.5	11			130		95		6	26/RC	
C64200	B150		Silicon Aluminum Bronze	4361	90.5						7			90		50		30	166	60
C67300		J461	Manganese Bronze		60.5	0.3	2.5	33						75		55		15	153	70
C72900			Toughmet 3 AT	4596	77	8			15					125		110		6	C30	
Cast Products																				
C86300	B505, B22	430B	High Tensile Mn	4862B	62		0.2	26		3	6		110	115	62	65	14	15	225+	8
C89835	B505		Lead-Free Bronze		87	6.7		3	1	0.2			30	35	14	18	15	20	65	70
C90300	B505	620	Navy "G"		88	8		4					44	45	22	21	18	30	70	30
C90500	B505, B22	62	Gun Metal	4845D	88	10		2					44	45	25	22	10	25	75	30
C90700	B505	65	Gear Bronze		89	11							35	40	18	25	10	20	80	20
C91100	B505, B22		Bridge Bronze		83	16	0.3	0.25	1					35		25		2	135	10
C93200	B505	660	Bearing Bronze		83	7	7	3					35	35	20	18	10	20	65	70
C93600	B505		Modified 64		79	6	11	1	1					33		20		10		80
C93700	B505, B22	64		4827	80	10	10						35	35	20	18	6	20	60	80
C95400	B505		Aluminum Bronze 9C	4870B	85					4	11		85	90	32	36	12	14	170+	60
C95500	B505		Aluminum Bronze 9D	4880	81				4	4	11		95	100	42	44	10	12	195+	50
C95510	B505		Nickel Aluminum Bronze	4880C	78				5	2.7	10		105		62.5		9		192-248	50
C95900	B505				82.5					4.5	13			90		50		0.5	241+	20
C96900	B505		Toughmet 3 CX 105		77	8			15					105		105		4	C27	
Sintered Products																				
SAE 841	B-438-05		Oil Impregnated Bronze		88	10				1				14		11		1		
SAE 863	B439		Oil Impregnated Fe/Cu		22					70				22		22		1		

This information has been gathered from multiple sources and is intended for reference only. These figures are not guaranteed and cannot be used as a basis of acceptance or rejection of material.