



ALLOY

C38500

Data Sheet

Typical Chemistry & Mechanical Properties

Alloy Number	Name	Nominal Chemical Composition	Tensile Strength (KSI)	Yield Strength (KSI)	Elongation %	Rockwell B Hardness
UNS C38500	Architectural Bronze	Cu: 55.0 ~ 59.0% Pb: 2.5 ~ 3.5% Fe: 0.35% max Zn: Rem	60	20	30%	65

Straightness Tolerances

Round	All Sizes	1/4" in any 10' portion
Hexagon / Octagonal:	Up to 2.500"	As Drawn
	> 2.500"	
Shape:	All Sizes	3/8" in any 10' portion

Drawn Length Tolerances

2.000" to 3.000" (inclusive)	+/- 0.500
3.000" to 4.000"	Random Mill Lengths

Schedule of Lengths

0.250" to 3.000"	10' ~ 12'
3.000" to 4.000" (inclusive)	Random Mill Lengths

Notes:

Typical Lengths: 10', 12', 14', 15' & 16'
 All other lengths considered non-standard
 Minimum Length: 9'11" (119")

Shapes and Sizes

Round:	0.250" to 4.000"
Hexagonal / Octagonal:	0.250" to 3.500"
Shape:	0.375" to 2.000"

Diameter Tolerances

	Round	Hexagonal
0.250" to 0.375" (inclusive):	+/- 0.0015"	+/- 0.0030"
0.375" to 0.500" (inclusive):	+/- 0.0015"	+/- 0.0030"
0.500" to 1.000" (inclusive):	+/- 0.0020"	+/- 0.0040"
1.000" to 2.000" (inclusive):	+/- 0.0025"	+/- 0.0050"
2.000" to 2.500" (inclusive):	+/- 0.0030"	+/- 0.0060"
2.500" to 3.000" (inclusive):	+/- 0.0035"	+/- 0.0075"
3.000" to 3.500" (inclusive):	+/- 0.0045"	+/- 0.0090"
3.500" to 4.000" (inclusive):	+/- 0.0055"	+/- 0.0100"



ALLOY

C38500

Data Sheet

Machinability: Alloy C38500 possesses excellent machinability characteristics with a machinability rating of 90%. The following tool dimensions and speeds are recommended:

	Speed (sfpm)	Feed (ipr)	Back Rake Angle (degrees)	Clearance Angle (degrees)
Lathe, Turning Tools:	300 ~ 1,000	0.002 ~ 0.015	0 ~ 5	6
Drills (118o)	301 ~ 1,000	0.003 ~ 0.020	0	12 ~ 15
Mill Cutters:	200 ~ 500	0.015 ~ 0.030	0 ~ 3	5 ~ 10
Form Tools (1/2o):	300 ~ 1,000	0.001 ~ 0.003	7 ~ 12	7 ~ 12
Taps:	100 ~ 200 (lineal)		2 ~ 4	

Use maximum speeds & minimum feeds for finish cuts. Light mineral (paraffin) oil or water soluble oil (20/1) should be used as a cutting lubricant & coolant. Sulfurized oils will stain parts and should be avoided.

Workability: Alloy C38500 exhibits an excellent capacity for being hot formed. Best results are obtained between 1150° ~ 1350°F (625° ~ 725°C). This alloy has a poor capacity to be cold worked. If cold working is required, it is recommended that this be followed by stress relief annealing at 500°F to reduce the possibility of stress corrosion cracking.

Spec. Equal.: UNS No. C38500
ASTM B455

Applications: C38500 (Architectural Bronze) can be used for various forms of architecture, builders hardware and consumer applications. Examples of products include: architectural forgings, trim, lock bodies and picture frames.

Port Huron Mill
2199 Lapeer Avenue • Port Huron, MI 48060
(P) 800.553.3336 • (P) 810.987.7770
(F) 810.987.9108

Belding Mill
302 Ashfield Street • Belding, MI 48809
(P) 800.553.3336 • (P) 616.794.1200
(F) 616.794.1214

MLT-261
MAY 2019

www.muellerbrass.com

 **MUELLER
BRASS CO.**