

Extruded or cast and drawn hardness ratings

Copper alloy UNS no.	Product description	Temper	Hardness type	Typical or min. or max.	Hardness
C14500	Tellurium copper	H02, H04	Brinell 500 kg load	Typical	H02-76, H04-81
C23000	Red brass 85%				
C24000	Low brass 80%	H01, H02, H04	Rockwell "B"	Typical	H01-55, H02-70, H04-82
C26000	Cartridge brass 70%	H01, H02, H04	Rockwell "B"	Typical	H01-55, H02-70, H04-82
C31400	Leaded commercial bronze	H02	Rockwell "B"	Typical	61
C31600	Leaded commercial bronze*	H04	Rockwell "B"	Typical	61
C46400	Naval brass, uninhibited	H02	Rockwell "B"	Min. to max.	55-80
C51000	Phosphor bronze 5% A	H04, H08	Rockwell "B"	Typical	87
C52100	Phosphor bronze 8% C	H04	Rockwell "B"	Typical	93
C53400	Phosphor bronze B-1	H04	Rockwell "B"	Typical	86
C54400	Phosphor bronze B-2	H04	Rockwell "B"	Typical	80
C62400	Aluminum bronze 11%				
C63000 (AMS 4640)	Nickel-aluminum bronze	HR50, TQ50	Brinell 3000 kg load	Min. to max.	187-248
C63020 (AMS 4590)	Nickel-aluminum bronze	TQ50	Rockwell "C"	Min.	26
C64200 (AMS 4634)	Aluminum bronze	HR50	Rockwell "B"	Min.	80
C64210	Aluminum silicon bronze	HR50	Rockwell "B"	Min. to max.	65-100
C65100	Low-silicon bronze B	H02, H04, H06	Rockwell "B"	Min. to max.	60-95
C67300	Manganese bronze	H02	Rockwell "B"	Min.	65
C67400	Manganese bronze		Rockwell "B"	Min.	78
C67410	Manganese bronze				
C67600	Manganese bronze	H02, H04	Rockwell "B"	Typical	90
C69300	Lead-free brass	H02	Rockwell "B"	Max.	85
C69400	Silicon red brass	H02, H04	Rockwell "B"	Typical	95
C69430	Silicon red brass	H02, H04	Rockwell "B"	Typical	95
C72900 (AMS 4596)	Copper nickel-tin bronze	TX 00	Rockwell "C"	Min.	30
C72900 (AMS 4597)	Copper nickel-tin bronze	TX TS	Rockwell "C"	Min.	34
C72900 (AMS 4598)	Copper nickel-tin bronze	TX 00	Rockwell "C"	Min.	30

*(nickel-bearing).

Extruded or cast and drawn machinability ratings

Copper alloy UNS no.	Product description	Machinability
C14500	Tellurium copper	85
C69300	Lead-free brass	85
C31400	Leaded commercial bronze	80
C31600	Leaded commercial bronze (nickel-bearing)	80
C54400	Phosphor bronze B-2	80
C67410	Manganese bronze	80
C53400	Phosphor bronze B-1	70
C67300	Manganese bronze	70
C64200 (AMS 4634)	Aluminum bronze	60
C64210	Aluminum silicon bronze	60
C67600	Manganese bronze	60
C62400	Aluminum bronze 11%	50
C23000	Red brass 85%	30
C24000	Low brass 80%	30
C26000	Cartridge brass 70%	30
C46400	Naval brass, uninhibited	30
C63000 (AMS 4640)	Nickel aluminum bronze	30
C65100	Low-silicon bronze B	30
C67400	Manganese bronze	30
C69400	Silicon red brass	30
C69430	Silicon red brass	30
C51000	Phosphor bronze 5% A	20
C52100	Phosphor bronze 8% C	20
C63020 (AMS 4590)	Nickel aluminum bronze	
C72900 (AMS 4596)	Copper nickel-tin bronze	
C72900 (AMS 4597)	Copper nickel-tin bronze	
C72900 (AMS 4598)	Copper nickel-tin bronze	