## Continuous-cast machinability ratings

C83800 Leaded red brass 90   C84400 Leaded semi-red brass 90   C84800 Leaded semi-red brass 90   C89520 Bismuth tin bronze 85   C89831 Bismuth tin bronze 85   C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C85700 Leaded yellow brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200	Copper alloy UNS no.	Product description	Machinability
C84400 Leaded semi-red brass 90   C84800 Leaded semi-red brass 90   C89520 Bismuth tin bronze 85   C89831 Bismuth tin bronze 85   C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C87850 Silicon brass 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93400 H			
C84800 Leaded semi-red brass 90   C89520 Bismuth tin bronze 85   C89831 Bismuth tin bronze 85   C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93400 <			
C89520 Bismuth tin bronze 85   C89831 Bismuth tin bronze 85   C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93300 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97600			
C89831 Bismuth tin bronze 85   C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97600 Nickel silver bronze 70   C97600<			
C83600 Leaded red brass 84   C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C893600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93400 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C954			
C89833 Bismuth tin bronze 81   C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93400 High-leaded tin bronze 70   C97600 Nickel silver bronze 70   C97600 Nickel silver bronze 70			
C84200 Leaded semi-red brass 80   C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C93800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C97600 Manganese bronze 65   C95400 </td <td></td> <td></td> <td></td>			
C85700 Leaded yellow brass 80   C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C93800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97600 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C95400 Aluminum bronze 65   C95400HT			
C89320 Bismuth tin bronze 80   C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97600 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60			
C89325 Bismuth tin bronze 80   C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C97600 Nickel silver bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410HT Aluminum bronze 60			
C93600 High-leaded tin bronze 80   C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C97400 Aluminum bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410HT Aluminum bronze 60			
C93700 High-leaded tin bronze 80   C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C96400 Aluminum bronze 65   C95400 Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60			
C93800 High-leaded tin bronze 80   C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60		3	
C93900 High-leaded tin bronze 80   C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60			
C94000 High-leaded tin bronze 80   C94100 High-leaded tin bronze 80   C94300 High-leaded tin bronze 80   C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60		3	
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C87850 Silicon brass 70   C89835 Bismuth tin bronze 70   C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60			
C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C87850	3	70
C89844 Bismuth tin bronze 70   C92800 Leaded tin bronze 70   C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60			
C93200 Leaded tin bronze 70   C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60		Bismuth tin bronze	70
C93400 High-leaded tin bronze 70   C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60			
C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C93200	Leaded tin bronze	70
C93500 High-leaded tin bronze 70   C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C93400	High-leaded tin bronze	70
C97300 Nickel silver bronze 70   C97600 Nickel silver bronze 70   C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C93500		70
C86400 Manganese bronze 65   C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C97300	3	70
C95400 Aluminum bronze 60   C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C97600	Nickel silver bronze	70
C95400HT Aluminum bronze 60   C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C86400	Manganese bronze	65
C95410 Aluminum bronze 60   C95410HT Aluminum bronze 60	C95400	3	60
C95410HT Aluminum bronze 60	C95400HT	Aluminum bronze	60
		Aluminum bronze	60
C95600 Nickel-aluminum bronze 60	C95410HT	Aluminum bronze	60
	C95600	Nickel-aluminum bronze	60

Copper alloy UNS no.	Product description	Machinability
C97800	Nickel silver bronze	60
C86700	Manganese bronze	55
C95300	Aluminum bronze	55
C95300HT	Aluminum bronze	55
C94800	Leaded nickel-tin bronze	50
C95500	Nickel-aluminum bronze	50
C95500HT	Nickel-aluminum bronze	50
C95510 (AMS 4880)	Nickel-aluminum bronze	50
C99500	Special alloy	50
C92700	Leaded tin bronze	45
C95520HT	Nickel-aluminum bronze	45
C92200	Leaded tin bronze	42
C92300	Leaded tin bronze	42
C92900	Leaded nickel-tin bronze	40
C86200	Manganese bronze	30
C90300	Tin bronze	30
C90500	Tin bronze	30
C92500	Nickel phosphor bronze	30
C86500	Manganese bronze	26
C90700	Tin bronze	20
C90810	High tin bronze	20
C91000	Tin bronze	20
C91600	High tin bronze	20
C91700	High tin bronze	20
C94700	Nickel-tin bronze	30
C94700HT	Nickel-tin bronze	30
C95200	Aluminum bronze	20
C95800	Nickel-aluminum bronze	20
C96400	Copper-nickel	20
C91100	High tin bronze	10
C91300	Tin bronze	10
C95900	Aluminum bronze	10
C86300	Manganese bronze	8

Note: HT = heat treated.