

Copper casting alloys ranked by thermal & Electrical conductivity

UNS Number	Thermal Conductivity Btu/ft ² /ft/h/°F at 68 F W/m • °K at 293 K	UNS Number	Thermal Conductivity Btu/ft ² /ft/h/°F at 68 F W/m • °K at 293 K	UNS Number	Thermal Conductivity Btu/ft ² /ft/h/°F at 68 F W/m • °K at 293 K	UNS Number	Thermal Conductivity Btu/ft ² /ft/h/°F at 68 F W/m • °K at 293 K	UNS Number	Thermal Conductivity Btu/ft ² /ft/h/°F at 68 F W/m • °K at 293 K	
C80100	226 391	C85500	67.0 116	C93500	40.7 70.4	C95200	29.1 50.4	C96600	17.4 30.1	
C81100	200 346	C86400	51.0 88.3	C92200	40.2 69.6	C92700	27.2 47.0	C97300	16.5 28.6	
C81500	182 315	C85400	50.8 87.9	C95300	36.3 62.8	C93700	27.1 46.9	C96400	16.4 28.5	
C81400	150 259	C86500	49.6 85.3	C94300	36.2 62.7	C96200	26.1 45.2	C87300	16.4 28.4	
C82000		C85200	48.5 83.9	C90200	36.0 62.3	C99300	25.4 43.9	C87400		16.0 27.7
C83400	109 188	C85700		43.2 74.8	C95400	33.9 58.7	C95500	24.2 41.9	C87500	
C82200	106 183	C90300	C83800		41.8 72.4		C92900	33.6 58.2	C94800	22.3 38.6
C82400	76.9 133	C84200	C84400	41.6 72.0		C93200	31.2 54.0		C95600	
C82500	74.9 130	C83600	C84500		40.8 70.6	C94700		30.2 52.3	C96300	20.8 36.0
C82700		C84800	C90700	C93800		20.5 35.5	C95800		20.5 35.5	
C82600	73.0 126	C91600	C93900	20.5 35.5	C86100		20.5 35.5	C86200		20.5 35.5
C82800	70.8 123	C91700	C94400		20.5 35.5	C86200		20.5 35.5	C86300	
			C94500	20.5 35.5		C86300	20.5 35.5		C86300	20.5 35.5

Unshaded areas = standard U.S. units
Shaded areas = metric units (SI)

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UNS Number	Electrical Conductivity % IACS at 68 F Megmho per cm at 20 C	UNS Number	Electrical Conductivity % IACS at 68 F Megmho per cm at 20 C	UNS Number	Electrical Conductivity % IACS at 68 F Megmho per cm at 20 C	UNS Number	Electrical Conductivity % IACS at 68 F Megmho per cm at 20 C	UNS Number	Electrical Conductivity % IACS at 68 F Megmho per cm at 20 C		
C80100	100 0.580	C82700	20 0.115	C90200	13 0.075	C99500	10 0.057	C96300	6 0.036		
C81100	92 0.534	C85400	20 0.113	C95300		12 0.070	C90700	10 0.056	C87300	6 0.035	
C81500	82 0.476	C86400	19 0.111	C93400			9 0.054	C91000	9 0.054		
C81400	60 0.348	C82600	19 0.110	C94800	9 0.053			C92900	9 0.053	C97300	6 0.033
C82200	45 0.261	C82800	18 0.104	C99400				12 0.069	C94300	9 0.052	C97400
C82000	45 0.260	C85200		17 0.097	C90300	11 0.064	C86800		9 0.052	C97600	5 0.029
C83400	44 0.256	C86700	16 0.096	C90500	11 0.066		C99300	8 0.049	C96400	5 0.028	
C83300	32 0.186	C84500	16 0.095	C92700			11 0.064	C91100	8 0.049	C97800	4 0.026
C85500	26 0.151	C84200	15 0.088	C93800	10 0.059	C95500		8 0.044	C96600	4 0.025	
C82400	25 0.144	C84400		15 0.087		C93900	10 0.058	C96200	8 0.046	C95700	3 0.018
C85700	22 0.128	C93500	14 0.083	C91600	7 0.041	C86300		7 0.041	C99700	3 0.017	
C86500		C83600	15 0.087	C91700		7 0.040	C95800	7 0.040	C99750	2 0.012	
C82500	20 0.116	C83800	14 0.083	C94400			7 0.039	C87400	7 0.039		
C85800		C92200	14 0.083	C94500				C87500			
				C99400		C87800					

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