

TYPE SHIVALIK	'a' 2	'F' 1	k	2	2	2	'P' 1	1	1	γ 2	'E' 2	'σ' 2	'K' 2	2	1		INSTANTANEOUS SPECIFIC DEFLECTION VALUES DEPENDING ON TEMPERATURE X10 ⁻⁶ /°C								
	SEPECIFIC DEF- LECTION TOL ± 5%	FLEXIVITY TOL ± 5%	THERMAL CURVA- TURE	RANGE OF LINEARITY	USEFUL DEFLEC- TION TEMP. RANGE	MAX TEMP. OF USAGE	RESISTI- VITY at 20°C	RESITI- VITY at 75°F	RESISTI- VITY TOL.	DENSITY	MODULUS OF ELASTICITY At 20°C	STRESS ADMISSIBLE at 20°C	THERMAL CON- DUCTIVITY	RECOM- ENDED HEAT TREATMENT FOR 2 HRS	STANDARD HARDNESS RANGE	L.E.SIDE	H.E. SIDE	TEMPERATURE IN °C							TYPE SHIVALIK
	X 10 ⁻⁶ /°C	X 10 ⁻⁶ /°F	X 10 ⁻⁶ /°C	°C	°C	°C	Ω mm ² /m	Ω circmil/ft	±%	g/cm ³	kN/mm ²	N/mm ²	W/cm ² C	°C	VICKERS	HARDNESS	NO	(-20 to 200)	250	300	350	400	450	500	
206-1	15.50	15.80	28.4	-20 to 200	-50 to 350	500	0.780	470	4	8.1	170	200	0.120	350	190-240	200-275	15.50	8.9	6.2	5.0	4.5	—	—	206-1	
206-2	14.00	14.60	26.3	-20 to 300	-50 to 400	500	0.770	465	4	8.1	170	200	0.120	350	190-240	200-275	14.00	7.6	4.5	4.0	3.1	2.8	2.3	206.2	
206-3	11.70	12.20	21.9	-20 to 380	-50 to 450	500	0.700	420	4	8.1	170	200	0.125	350	190-240	200-275	11.70	12.0	12.0	10.3	6.2	4.8	4.2	206-3	
223-1	14.30	15.00	27.0	-20 to 150	-50 to 350	500	0.790	475	4	8.1	170	200	0.120	350	190-240	200-275	14.30	6.5	3.6	3.0	2.7	2.5	2.2	223-1	
223-3	11.20	11.70	21.0	-20 to 350	-50 to 450	500	0.690	415	4	8.1	170	200	0.130	350	190-240	200-275	11.20	12.7	12.5	9.6	6.2	4.7	4.3	223-3	
223-N	4.40	4.60	8.3	-20 to 200	-50 to 450	500	0.158	95	6	8.6	200	150	0.420	350	190-240	200-275	4.40	3.2	2.9	2.0	1.8	—	—	223-N	
N-1	9.70	10.20	18.4	-20 to 150	-50 to 260	450	0.158	95	6	8.6	170	150	0.420	350	190-240	190-240	9.70	3.1	1.6	0.7	0.3	-0.2	-0.6	N-1	
703-1	14.30	15.00	27.0	-20 to 150	-50 to 175	175	0.123	74	15	8.3	130	140	1.980	150	190-240	150-180	14.30	—	—	—	—	—	—	703-1	
206 Cu 6	14.20	14.80	26.6	-20 to 200	-50 to 250	400	0.060	36	10	8.4	165	200	1.360	250	190-240	200-275	14.20	8.1	5.4	4.4	3.8	—	—	206 Cu 6	
206 Cu 11	15.00	15.40	27.7	-20 to 200	-50 to 250	400	0.110	66	7	8.2	165	200	0.650	250	190-240	200-275	15.00	8.5	5.8	4.9	4.2	—	—	206 Cu 11	
206 Cu 15	14.90	15.60	28.0	-20 to 200	-50 to 250	400	0.150	90	7	8.2	170	200	0.550	250	190-240	200-275	14.90	8.8	6.0	5.0	4.3	—	—	206 Cu 15	
206 Cu 17	14.90	15.60	28.0	-20 to 200	-50 to 250	400	0.170	100	7	8.2	170	200	0.460	250	190-240	200-275	14.90	8.8	6.0	5.0	4.3	—	—	206 Cu 17	
206 Cu 19	14.90	15.60	28.0	-20 to 200	-50 to 250	400	0.191	115	6	8.2	170	200	0.400	250	190-240	200-275	14.90	8.8	6.0	5.0	4.3	—	—	206 Cu 19	
206 Ni 25	14.00	14.50	26.1	-20 to 200	-50 to 350	450	0.250	150	6	8.5	170	200	0.270	350	190-240	200-275	14.00	8.5	5.5	4.6	4.1	—	—	206 Ni 25	
206 Ni 35	14.80	15.20	27.3	-20 to 200	-50 to 350	450	0.352	210	5	8.3	170	200	0.220	350	190-240	200-275	14.80	8.7	5.6	4.7	4.2	—	—	206 Ni 35	
206 Ni 45	14.90	15.60	28.0	-20 to 200	-50 to 350	450	0.450	270	5	8.2	170	200	0.180	350	190-240	200-275	14.90	8.9	5.7	4.8	4.3	—	—	206 Ni 45	
206 Ni 50	14.70	15.40	27.7	-20 to 200	-50 to 350	450	0.500	300	5	8.2	170	200	0.180	350	190-240	200-275	14.70	9.1	5.8	4.9	4.4	—	—	206 Ni 50	
206 Cu 9H	11.50	12.00	21.6	-20 to 380	-50 to 350	450	0.090	55	10	8.2	170	200	0.160	350	190-240	200-275	11.50	9.8	9.1	7.2	6.0	5.0	—	206 Cu 9H	
206 Ni 55	15.00	15.70	28.3	-20 to 200	-50 to 350	450	0.550	330	5	8.2	170	200	0.163	350	190-240	200-275	15.00	9.1	5.8	4.9	4.4	—	—	206 Ni 55	
223 Cu 3	12.20	12.80	23.0	-20 to 150	-50 to 250	350	0.033	20	10	8.6	140	150	2.240	250	190-240	80-120	12.20	4.6	3.2	1.9	—	—	—	223 Cu 3	
223 Cu 4	12.90	13.50	24.3	-20 to 150	-50 to 250	350	0.042	25	10	8.6	150	150	1.880	250	190-240	80-120	12.90	5.0	3.0	1.8	—	—	—	223 Cu 4	
223 Cu 5	13.20	13.90	25.0	-20 to 150	-50 to 250	350	0.050	30	10	8.5	160	150	1.601	250	190-240	200-275	13.20	5.0	3.1	1.8	—	—	—	223 Cu 5	
223 Cu 6	13.50	14.20	25.6	-20 to 150	-50 to 250	350	0.058	35	10	8.4	160	150	1.360	250	190-240	200-275	13.50	5.1	3.4	2.0	—	—	—	223 Cu 6	
223 Cu 7	13.70	14.40	25.9	-20 to 150	-50 to 250	350	0.070	40	10	8.3	160	150	1.422	250	190-240	200-275	13.70	5.3	3.7	2.2	—	—	—	223 Cu 7	
223 Cu 8	13.90	14.60	26.3	-20 to 150	-50 to 250	350	0.083	50	9	8.3	165	150	1.041	250	190-240	200-275	13.90	5.5	3.7	2.3	—	—	—	223 Cu 8	
223 Cu 11	14.00	14.70	26.4	-20 to 150	-50 to 250	350	0.116	70	7	8.3	170	150	0.712	250	190-240	200-275	14.00	5.6	3.8	2.4	—	—	—	223 Cu 11	
223 Cu 15	14.10	14.80	26.6	-20 to 150	-50 to 250	350	0.150	90	7	8.3	170	150	0.540	250	190-240	200-275	14.10	5.7	3.9	2.6	—	—	—	223 Cu 15	
223 Cu 16	14.10	14.80	26.6	-20 to 150	-50 to 250	350	0.166	100	7	8.3	170	150	0.140	250	190-240	200-275	14.10	6.2	3.9	2.8	—	—	—	223 Cu 16	
223 Ni 16	11.00	11.50	20.7	-20 to 150	-50 to 350	500	0.166	100	7	8.3	180	200	0.412	350	190-240	200-275	11.00	4.0	2.4	1.6	1.5	1.5	1.5	223 Ni 16	
223 Ni 20	12.50	13.10	23.6	-20 to 150	-50 to 350	500	0.208	125	6	8.3	180	200	0.341	350	190-240	200-275	12.50	5.3	3.1	2.4	2.2	1.8	1.6	223 Ni 20	
223 Ni 25	13.00	13.70	24.7	-20 to 150	-50 to 350	500	0.249	150	6	8.3	180	200	0.292	350	190-240	200-275	13.00	5.1	3.5	2.5	1.8	1.6	1.5	223 Ni 25	
223 Ni 30	13.40	14.10	25.4	-20 to 150	-50 to 350	500	0.291	175	6	8.3	175	200	0.252	350	190-240	200-275	13.40	5.2	3.6	2.7	2.0	1.7	1.5	223 Ni 30	
223 Ni 35	13.70	14.40	25.9	-20 to 150	-50 to 350	500	0.332	200	5	8.3	175	200	0.212	350	190-240	200-275	13.70	4.8	3.0	2.5	2.4	2.1	1.7	223 Ni 35	
223 Ni 40	14.00	14.70	26.4	-20 to 150	-50 to 350	500	0.416	250	5	8.3	175	200	0.200	350	190-240	200-275	14.00	6.4	4.2	3.3	2.8	2.6	2.3	223 Ni 40	
223 Ni 50	14.20	14.90	26.8	-20 to 150	-50 to 350	500	0.499	300	5	8.3	170	200	0.171	350	190-240	200-275	14.20	6.4	4.2	3.3	2.8	2.6	2.3	223 Ni 50	
223 Ni 60	14.30	15.00	27.0	-20 to 150	-50 to 350	500	0.582	350	5	8.1	170	200	0.162	350	190-240	200-275	14.30	6.1	3.1	2.9	2.6	2.3	2.1	223 Ni 60	
721-112	20.50	21.5	38.7	-20 to 200	-50 to 250	350	1.122	675	5	7.8	140	200	0.061	260	190-240	185-235	20.50	15.5	13.9	—	—	—	—	721-112	
721-140	15.20	15.9	28.6	-20 to 200	-50 to 260	350	1.413	850	5	7.6	136	200	0.050	260	190-240	185-235	15.20	11.8	9.6	—	—	—	—	721-140	
721 Cu 5	17.60	18.5	33.3	-20 to 200	-50 to 260	350	0.050	30	10	7.9	140	150	1.600	260	190-240	185-235	17.60	12.9	10.9	—	—	—	—	721 Cu 5	
721 Cu 8	18.90	19.8	35.6	-20 to 200	-50 to 260	350	0.083	50	9	7.9	140	150	1.000	260	190-240	185-235	18.90	13.9	11.9	—	—	—	—	721 Cu 8	
721 Cu 11	19.5	20.5	36.9	-20 to 200	-50 to 260	350	0.113	68	8	7.9	140	150	0.710	260	190-240	185-235	19.50	14.3	12.3	—	—	—	—	721 Cu 11	
721 Cu 15	20.1	21.1	37.9	-20 to 200	-50 to 260	350	0.150	90	7	7.9	140	150	0.541	260	190-240	185-235	20.1	14.4	12.2	—	—	—	—	721 Cu 15	
721 Cu 17	20.1	21.1	37.9	-20 to 200	-50 to 260	350	0.166	100	7	7.9	140	150	0.462	260	190-240	185-235	20.1	14.6	12.3	—	—	—	—	721 Cu 17	
721 Cu 20	20.2	21.2	38.2	-20 to 200	-50 to 260	350	0.208	125	7	7.9	140	150	0.365	260	190-240	185-235	20.2	14.8	12.3	—	—	—	—	721 Cu 20	
721 Cu 25	20.2	21.2	38.2	-20 to 200	-50 to 260	350	0.249	150	6	7.9	140	150	0.270	260	190-240	185-235	20.2	14.7	12.3	—	—	—	—	721 Cu 25	
721 Cu 30	20.2	21.2	38.1	-20 to 200	-50 to 260	350	0.291	175	6	7.9	140	150	0.250	260	190-240	185-235	20.2	14.7	12.3	—	—	—	—	721 Cu 30	
721 Cu 35	20.5	21.5	38.7	-20 to 200	-50 to 260	350	0.332	200	6	7.9	140	150	0.210	260	190-240	185-235	20.5	14.7	12.3	—	—	—	—	721 Cu 35	
721 Cu 40	20.5	21.5	38.7	-20 to 200	-50 to 260	350	0.416	250	6	7.9	140	150	0.190	260	190-240	185-235	20.5	14.7	12.4	—	—	—	—	721 Cu 40	
721 S 50	20.5	21.5	38.7	-20 to 200	-50 to 260	350	0.499	300	5	7.9	140	150	0.170	2											