

APPENDIX A - COMPLETE TABLE OF MEASURED PROPERTIES FOR WEAR TESTING

	A/X/C	Density (g/cm ³)	2.0Hv	E (GPa)	K (GPa)	G (GPa)	k, Dim. Wear Coeff.
Cu38Zr42Al7Be10Nb3	A	6.948	626.5	108.5	119.5	40.2	6.60E-05
Cu44Zr46Al5Y2Nb3	A	6.925	407.4	76.9	110.7	27.8	9.63E-05
Cu42.5Zr42.5Al7Be5Nb3	A	7.020	544.4	97.8	118.5	35.9	6.53E-05
Cu41.5Zr41.5Al7Be7Nb3	A	6.867	523.9	102.0	115.2	37.7	7.89E-05
Cu40Zr40Al10Be10	A	6.582	604.3	114.2	117.0	42.7	1.14E-04
Cu42Zr41Al7Be7Co3	A	6.846	532.4	101.3	117.8	37.3	1.10E-04
Cu47Zr46Al5Y2 (POD)	A	7.003	409.8	75.3	115.9	27.1	5.95E-05
Cu42Zr41Al7Be7Cr3	A	6.813	575.1	106.5	116.1	39.5	6.73E-05
Cu44Zr44Al5Ni3Be4	A	7.014	504.3	95.5	115.7	35.1	9.51E-05
Cu41.5Zr41.5Al7Be10	A	6.722	557.6	104.5	113.9	38.8	8.68E-05
Cu44Zr44Al7Be5	A	6.978	514.3	99.0	114.0	36.5	7.76E-05
Cu43Zr43Al7Be7	A	6.811	550.3	99.0	111.3	36.6	9.38E-05
Cu41Zr40Al7Be7Co5	C	6.864	589.9	103.5	116.8	38.3	1.05E-04
Cu43Zr43Al7Ag7	C	7.224	496.1	90.6	117.6	33.0	8.65E-05
Cu47.5Zr48Al4Co0.5	X	7.138	381.9	79.6	116.3	28.7	8.76E-05
Cu50Zr50	X	7.313	325.9	81.3	116.8	29.4	7.98E-05
Cu46.5Zr46.5Al7	X	7.007	510.5	101.4	113.0	37.5	8.92E-05
Cu44Zr44Al7Ni5	X	7.052	570.0	99.2	114.8	36.6	7.68E-05

	A/X/C	Poisson Ratio	POD (mg)	Volume Loss (mm ³)	Rm (μm)	Track Width (mm)	k, Dim. Wear Coeff.
Cu38Zr42Al7Be10Nb3	A	0.35	0.6	0.079	1.930	0.65	6.60E-05
Cu44Zr46Al5Y2Nb3	A	0.38	0.8	0.116	2.237	0.71	9.63E-05
Cu42.5Zr42.5Al7Be5Nb3	A	0.36	0.6	0.078	1.800	0.73	6.53E-05
Cu41.5Zr41.5Al7Be7Nb3	A	0.35	0.7	0.095	1.757	0.85	7.89E-05
Cu40Zr40Al10Be10	A	0.34	0.9	0.137	2.138	0.64	1.14E-04
Cu42Zr41Al7Be7Co3	A	0.36	0.9	0.131	1.981	0.86	1.10E-04
Cu47Zr46Al5Y2 (POD)	A	0.39	0.5	0.071	3.389	0.69	5.95E-05
Cu42Zr41Al7Be7Cr3	A	0.35	0.6	0.081	1.924	0.71	6.73E-05
Cu44Zr44Al5Ni3Be4	A	0.36	0.8	0.114	2.368	0.85	9.51E-05
Cu41.5Zr41.5Al7Be10	A	0.35	0.7	0.104	1.554	0.65	8.68E-05
Cu44Zr44Al7Be5	A	0.36	0.7	0.093	1.741	0.76	7.76E-05
Cu43Zr43Al7Be7	A	0.35	0.8	0.113	1.290	0.74	9.38E-05
Cu41Zr40Al7Be7Co5	C	0.35	0.9	0.126	1.605	0.78	1.05E-04
Cu43Zr43Al7Ag7	C	0.37	0.8	0.104	1.292	0.75	8.65E-05
Cu47.5Zr48Al4Co0.5	X	0.39	0.8	0.105	1.797	0.78	8.76E-05
Cu50Zr50	X	0.38	0.7	0.096	1.693	0.80	7.98E-05
Cu46.5Zr46.5Al7	X	0.35	0.8	0.107	1.336	0.69	8.92E-05
Cu44Zr44Al7Ni5	X	0.36	0.7	0.092	1.042	0.61	7.68E-05

	A/X/C	Density (g/cm ³)	2.0Hv	E (GPa)	K (GPa)	G (GPa)	k, Dim. Wear Coeff.
Ni40Zr28.5Ti16.5Be15	C	6.432	715.2	128.4	131.7	48.0	1.04E-04
Ni40Zr28.5Ti16.5Cu5Be10	C	6.649	668.2	112.0	129.2	41.3	3.76E-05
Ni40Zr28.5Ti16.5Cu5Al10	X	6.485	627.2	99.3	128.7	36.2	3.53E-05
Ni56Zr17Ti13Si2Sn3Be9	X	6.895	562.5	141.1	144.7	52.7	1.21E-05
Ni57Zr18Ti14Si2Sn3Be6	X	6.958	637.3	139.4	145.4	52.0	3.59E-05
Ti33.18Zr30.51Ni5.33Be22.88Cu8.1	A	5.481	486.1	96.9	110.6	35.8	1.75E-04
Ti40Zr25Be30Cr5	A	4.850	465.4	97.5	104.6	36.2	7.47E-04
Ti40Zr25Ni8Cu9Be18	A	5.501	544.4	101.1	110.8	37.5	1.44E-04
Ti45Zr16Ni9Cu10Be20	A	5.322	523.1	104.2	111.1	38.8	1.49E-04
Zr41.2Ti13.8Cu12.5Ni10Be22.5	A	6.061	530.4	95.2	109.6	35.1	3.16E-04
Zr52.5Ti5Cu17.9Ni14.6Al10	A	6.670	474.4	88.5	110.5	32.4	2.19E-04
Zr57Nb5Al10Cu15.4Ni12.6	A	6.667	439.7	83.3	111.5	30.3	2.37E-04
Zr65Cu17.5Al7.5Ni10	A	6.643	463.3	116.9	110.5	44.2	1.82E-04
Zr55Cu30Al10Ni5	A	6.690	520.8	87.2	110.3	31.9	3.36E-04
Zr35Ti30Be27.5Cu7.5	A	5.361	461.8	90.5	104.4	33.4	5.83E-04
Zr36.6Ti31.4Nb7Cu5.9Be19.1	C	5.700	391.1	84.7	105.8	31.0	6.21E-04
Zr55Al20Co25	C	6.176	602.5	119.6	108.9	45.4	7.89E-04

	A/X/C	Poisson Ratio	POD (mg)	Volume Loss (mm ³)	Rm (μm)	Track Width (mm)	k, Dim. Wear Coeff.
Ni40Zr28.5Ti16.5Be15	C	0.34	0.8	0.124	1.698	0.47	1.04E-04
Ni40Zr28.5Ti16.5Cu5Be10	C	0.36	0.3	0.045	0.768	0.82	3.76E-05
Ni40Zr28.5Ti16.5Cu5Al10	X	0.37	0.3	0.042	0.836	0.66	3.53E-05
Ni56Zr17Ti13Si2Sn3Be9	X	0.34	0.1	0.015	0.487	0.38	1.21E-05
Ni57Zr18Ti14Si2Sn3Be6	X	0.34	0.3	0.043	1.578	0.43	3.59E-05
Ti33.18Zr30.51Ni5.33Be22.88Cu8.1	A	0.35	1.2	0.210	3.162	0.79	1.75E-04
Ti40Zr25Be30Cr5	A	0.34	4.4	0.897	12.150	0.80	7.47E-04
Ti40Zr25Ni8Cu9Be18	A	0.35	1.0	0.173	2.325	0.83	1.44E-04
Ti45Zr16Ni9Cu10Be20	A	0.34	1.0	0.179	2.309	0.90	1.49E-04
Zr41.2Ti13.8Cu12.5Ni10Be22.5	A	0.36	2.3	0.379	6.788	0.71	3.16E-04
Zr52.5Ti5Cu17.9Ni14.6Al10	A	0.37	1.8	0.262	3.607	0.58	2.19E-04
Zr57Nb5Al10Cu15.4Ni12.6	A	0.38	1.9	0.285	6.413	0.75	2.37E-04
Zr65Cu17.5Al7.5Ni10	A	0.32	1.5	0.218	3.082	0.62	1.82E-04
Zr55Cu30Al10Ni5	A	0.37	2.7	0.404	3.754	0.92	3.36E-04
Zr35Ti30Be27.5Cu7.5	A	0.36	3.8	0.699	11.796	1.04	5.83E-04
Zr36.6Ti31.4Nb7Cu5.9Be19.1	C	0.37	4.3	0.746	4.951	0.79	6.21E-04
Zr55Al20Co25	C	0.32	5.9	0.947	9.532	0.71	7.89E-04