

Material	Condition	r (g/cm ³)	E (GPa)	n	sy (MPa)	TS (MPa)	%EL	K1c MPa√m	a (10 ⁻⁶ / deg C)	k (W/m-K)	c (J/kg-K)	re (W-m)	\$/kg
Steel alloy A36	Plate; hot rolled	7.85	207	0.3	220-250	400-500	23		11.7	51.9	486	1.60E-07	0.50-0.90
Steel alloy A36	Angle bar; hot rolled	7.85	207	0.3					11.7	51.9	486	1.60E-07	1.15
Steel alloy 1020	Plate; hot rolled	7.85	207	0.3	210	380	25		11.7	51.9	486		0.50-0.60
Steel alloy 1020	Plate; cold rolled	7.85	207	0.3	350	420	15		11.7	51.9	486		0.85-1.45
Steel alloy 1020	Annealed @ 870°C	7.85	207	0.3	295	395	36.5		11.7	51.9	486	1.60E-07	
Steel alloy 1020	Normalized @ 925°C	7.85	207	0.3	345	440	38.5		11.7	51.9	486		
Steel alloy 1040	Plate; hot rolled	7.85	207	0.3	290	520	18		11.3	51.9	486		0.75-0.85
Steel alloy 1040	Plate; cold rolled	7.85	207	0.3	490	590	12		11.3	51.9	486		1.3
Steel alloy 1040	Annealed @ 785°C	7.85	207	0.3	355	520	30.2		11.3	51.9	486	1.60E-07	
Steel alloy 1040	Normalized @ 900°C	7.85	207	0.3	375	590	28		11.3	51.9	486		
Steel alloy 4140	Annealed @ 815°C	7.85	207	0.3	417	655	25.7		12.3				
Steel alloy 4140	Bar; normalized @ 870°C	7.85	207	0.3	655	1020	17.7		12.3				1.75-1.95
Steel alloy 4140	H grade round; normalized	7.85	207	0.3					12.3				2.85-3.05
Steel alloy 4140	Quenched/tempered @ 315°C	7.85	207	0.3	1570	1720	11.5		12.3			2.20E-07	
Steel alloy 4140	Quenched/tempered @ 370°C	7.85	207	0.3				55-65	12.3			2.20E-07	
Steel alloy 4140	Quenched/tempered @ 482°C	7.85	207	0.3				75-93	12.3			2.20E-07	
Steel alloy 4340	Bar; annealed @ 810°C	7.85	207	0.3	472	745	22		12.3				2.45
Steel alloy 4340	Bar; normalized @ 870°C	7.85	207	0.3	862	1280	12.2		12.3				3.3
Steel alloy 4340	Quenched/tempered @ 260°C	7.85	207	0.3				50	12.3			2.48E-07	
Steel alloy 4340	Quenched/tempered @ 315°C	7.85	207	0.3	1620	1760	12		12.3			2.48E-07	
Steel alloy 4340	Quenched/tempered @ 425°C	7.85	207	0.3				87.4	12.3			2.48E-07	
Stainless alloy 304	Plate; hot finished/annealed	8	193	0.3	205	515	40		17.2	16.2	500	7.20E-07	2.15-3.50
Stainless alloy 304	Cold worked (1/4 hard)	8	193	0.3	515	860	10		17.2	16.2	500		
Stainless alloy 316	Plate; hot finished/annealed	8	193	0.3	205	515	40		15.9	16.2	500	7.40E-07	3.00-4.40
Stainless alloy 316	Round; cold drawn/annealed	8	193	0.3	310	620	30		15.9	16.2	500		6.2
Stainless alloy 405	Annealed	7.8	200	0.3	170	415	20		10.8	27	460	6.00E-07	
Stainless alloy 440A	Plate; annealed	7.8	200	0.3	415	725	20		10.2	24.2	460	6.00E-07	4.40-5.00
Stainless alloy 440A	Quenched/tempered @ 315°C	7.8	200	0.3	1650	1790	5		10.2	24.2	460		
Stainless alloy 17-7PH	Plate; cold rolled	7.65	204	0.3	1210	1380	1		11	16.4	460		6.85-10.00
Stainless alloy 17-7PH	Pptn. hardened @ 510°C	7.65	204	0.3	1310	1450	3.5	76	11	16.4	440		
Gray iron; grade G1800	As cast; high production	7.3	66-97	0.26		124			11.4	46	544	1.50E-06	1.20-1.50
Gray iron; grade G1800	As cast; low production	7.3	66-97	0.26		124			11.4	46	544	1.50E-06	3.3
Gray iron; grade G3000	As cast; high production	7.3	90-113	0.26		207			11.4	46	544	9.50E-07	1.20-1.50
Gray iron; grade G3000	As cast; low production	7.3	90-113	0.26		207			11.4	46	544	9.50E-07	3.3
Gray iron; grade G4000	As cast; high production	7.3	110-138	0.26		276			11.4	46	544	8.50E-07	1.20-1.50
Gray iron; grade G4000	As cast; low production	7.3	110-138	0.26		276			11.4	46	544	8.50E-07	3.3
Ductile iron; grade 60-40-18	Annealed; high production	7.1	169	0.29	276	414	18		11.2	36	544	5.50E-07	1.45-1.85
Ductile iron; grade 60-40-18	Annealed; low production	7.1	169	0.29	276	414	18		11.2	36	544	5.50E-07	3.30-5.00
Ductile iron; grade 80-55-06	As cast; high production	7.1	168	0.31	379	552	6		10.6	36	544	6.20E-07	1.45-1.85
Ductile iron; grade 80-55-06	As cast; low production	7.1	168	0.31	379	552	6		10.6	36	544	6.20E-07	3.30-5.00
Ductile iron; grade 120-90-02	Quenched/tempered; high prod.	7.1	164	0.28	621	827	2			36	544	6.20E-07	1.45-1.85
Ductile iron; grade 120-90-02	Quenched/tempered; low prod.	7.1	164	0.28	621	827	2			36	544	6.20E-07	3.30-5.00
Aluminum Alloy 1100	Sheet; annealed (O temper)	2.71	69	0.33	34	90	40		23.6	222	904	2.92E-08	7.25-10.00
Aluminum Alloy 1100	Strain hardened (H14 temper)	2.71	69	0.33	117	124	15		23.6	222	904		
Aluminum Alloy 2024	Annealed (O temper)	2.77	72.4	0.33	75	185	20		22.9	190	875	3.40E-08	
Aluminum Alloy 2024	Sheet; heat treated (T3 temper)	2.77	72.4	0.33	345	485	18	44	22.9	190	875		8.80-11.00
Aluminum Alloy 2024	Bar; heat treated (T351 temper)	2.77	72.4	0.33	325	470	20		22.9	190	875		11.35
Aluminum Alloy 6061	Annealed (O temper)	2.7	69	0.33	55	124	30		23.6	180	896	3.70E-08	
Aluminum Alloy 6061	Heat treated (T6 temper)	2.7	69	0.33	276	310	17		23.6	180	896		4.40-6.20
Aluminum Alloy 6061	Bar; heat treated (T651 temper)	2.7	69	0.33	276	310	17		23.6	180	896		6.1
Aluminum Alloy 7075	Annealed (O temper)	2.8	71	0.33	103	228	17		23.4	130	960		
Aluminum Alloy 7075	Sheet; heat treated (T6 temper)	2.8	71	0.33	505	572	11		23.4	130	960	5.22E-08	9.00-9.70
Aluminum Alloy 7075	Heat treated (T651 temper)	2.8	71	0.33	505	572	11	24	23.4	130	960		
Aluminum Alloy 356.0	As cast; high production	2.69	72.4	0.33	124	164	6		21.5	151	963		4.40-6.60
Aluminum Alloy 356.0	As cast; custom pieces	2.69	72.4	0.33	124	164	6		21.5	151	963		11
Aluminum Alloy 356.0	T6 temper; custom pieces	2.69	72.4	0.33	164	228	3.5		21.5	151	963	4.42E-08	11.65
Copper C11000 (ETP)	Sheet; hot rolled	8.89	115	0.33	69	220	50		17	388	385	1.72E-08	4.00-7.00
Copper C11000 (ETP)	Cold worked (H04 temper)	8.89	115	0.33	310	345	12		17	388	385	1.75E-08	
Copper C17200 (Be-copper)	Sheet; soln. heat treated	8.25	128	0.3	195-380	415-540	35-60		16.7	105-130	420	9.60E-08	25.00-47.00
Copper C17200 (Be-copper)	Soln. heat treated/aged	8.25	128	0.3	965-1205	1140-1310	10-Apr		16.7	105-130	420	7.40E-08	
Copper C26000 (cart. brass)	Sheet; annealed	8.53	110	0.35	75-150	300-365	54-68		19.9	120	375	6.20E-08	3.50-4.85
Copper C26000 (cart. brass)	Cold worked (H04 temper)	8.53	110	0.35	435	525	8		19.9	120	375		
Copper C36000 (free cut brass)	Sheet/rod; annealed	8.5	97	0.34	125	340	53		20.5	115	380	6.60E-08	3.20-4.00

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Copper C36000 (free cut brass)	Cold worked	8.5	97	0.34	310	400	25		20.5	115	380		
Copper C71500 (70Cu-30Ni)	Sheet; hot rolled	8.94	150	0.34	140	380	45		16.2	29	380	3.75E-07	8.50-9.50
Copper C71500 (70Cu-30Ni)	Sheet; cold worked (H80 temper)	8.94	150	0.34	545	580	3		16.2	29	380		
Copper C93200 (bear. bronze)	Bar; sand cast	8.93	100	0.34	125	240	20		18	59	376	1.44E-07	4.50-6.50
Copper C93200 (bear. bronze)	As cast; custom piece	8.93	100	0.34	125	240	20		18	59	376	1.44E-07	12.2
Magnesium Alloy AZ31B	Sheet; rolled	1.77	45	0.35	220	290	15		26	96	1024	9.20E-08	11
Magnesium Alloy AZ31B	Sheet; extruded	1.77	45	0.35	200	262	15	28	26	96	1024	9.20E-08	8.8
Magnesium Alloy AZ91D	As cast	1.81	45	0.35	97-150	165-230	3		26	72	1050	1.70E-07	3.8
Titanium; comm. Pure (grade 1)	Annealed	4.51	103	0.34	170	240	30		8.6	16	528	4.2E-07-5.2E-07	28.00-65.00
Titanium alloy Ti-5Al-2.5Sn	Annealed (air cooled)	4.48	110	0.34	760	790	16	71.4	9.4	7.6	470	1.57E-06	90.00-130.00
Titanium alloy Ti-6Al-4V	Annealed (equiaxed grains)	4.43	114	0.34	830	900	14	44-66	8.6	6.7	610	1.71E-06	55.00-130.00
Titanium alloy Ti-6Al-4V	Soin. heat treated/aged	4.43	114	0.34	1103	1172	10		8.6	6.7	610	1.71E-06	
Gold; commercially pure	Bullion; annealed	19.32	77	0.42		130	45		14.2	315	130	2.35E-08	9500-10250
Gold; commercially pure	Cold worked (60% red.)	19.32	77	0.42	205	220	4		14.2	315	130	2.35E-08	9500-10250
Platinum; commercially pure	Bullion; annealed	21.45	171	0.39	13.8	125-165	30-40		9.1	71	132	1.06E-07	11400-14400
Platinum; commercially pure	Cold worked (50%)	21.45	171	0.39		205-240	3-Jan		9.1	71	132	1.06E-07	11400-14400
Silver; commercially pure	Bullion; annealed	10.49	74	0.37		170	44		19.7	428	235	1.47E-08	170.00-210.00
Silver; commercially pure	Cold worked (50%)	10.49	74	0.37		296	3.5		19.7	428	235	1.75E-08	170.00-210.00
Molybdenum; comm. pure	Sheet/rod	10.22	320	0.32	500	630	25		4.9	142	276	5.20E-08	85.00-115.00
Tantalum; commercially pure	Sheet	16.6	185	0.35	165	205	40		6.5	54.4	139	1.35E-07	390.00-440.00
Tungsten; commercially pure	Sheet	19.3	400	0.28	760	960	2		4.5	155	138	5.30E-08	77.5
Tungsten; commercially pure	Rod	19.3	400	0.28	760	960	2		4.5	155	138	5.30E-08	97.00-135.00
Nickel 200	Annealed	8.89	204	0.31	148	462	47		13.3	70	456	9.50E-08	19.00-25.00
Inconel 625	Annealed	8.44	207	0.31	517	930	42.5		12.8	9.8	410	1.29E-06	20.00-29.00
Monel 400	Annealed	8.8	180	0.32	240	550	40		13.9	21.8	427	5.47E-07	15.50-16.50
Haynes alloy 25		9.13	236		445	970	62		12.3	9.8	377	8.90E-07	85.50-103.50
Invar	Annealed	8.05	141		276	517	30		1.6	10	500	8.20E-07	17.25-19.75
Super invar	Annealed	8.1	144		276	483	30		0.72	10	500	8.00E-07	22.00-33.00
Kovar	Annealed	8.36	207		276	517	30		5.1	17	460	4.90E-07	30.75-39.75
Chemical lead	Ingot	11.34	13.5	0.44					29.3	35	129	2.06E-07	1.2
Chemical lead	Plate	11.34	13.5	0.44	8-Jun	16-19	30-60		29.3	35	129	2.06E-07	1.55-1.95
Antimonial lead (6%)	Ingot	10.88				47.2	24		27.2	29	135	2.53E-07	1.5
Antimonial lead (6%)	Plate	10.88							27.2	29	135	2.53E-07	2.00-2.70
Tin; commercially pure	Ingot	7.17	44.3	0.33	11		57		23.8	60.7	222	1.11E-07	6.85-8.85
Lead-tin solder (60Sn-40Pb)	Bar	8.52	30			52.5	30-60		24	50	150	1.50E-07	5.50-7.50
Zinc; commercially pure	Ingot	7.14	104.5	0.25					23.0-32.5	108	395	6.20E-06	1.2
Zinc; commercially pure	Anode	7.14	104.5	0.25					23.0-32.5	108	395	6.20E-06	1.65-2.45
Zinc; commercially pure	Hold rolled (anisotropic)	7.14	104.5	0.25		134-159	50-65		23.0-32.5	108	395	6.20E-06	1.2
Zinc; commercially pure	Cold rolled (anisotropic)	7.14	104.5	0.25		145-186	40-50		23.0-32.5	108	395	6.20E-06	
Zirconium; reactor grade 702	Cold worked/annealed	6.51	99.3	0.35	207	379	16		5.9	22	285	3.97E-07	44.00-48.50
Aluminum oxide; 99.9% pure		3.98	380	0.22		282-551		4.2-5.9	7.4	39	775	> 1E+13	
Aluminum oxide; 99% pure	1/4" dia. grinding media												28.65
Aluminum oxide; 96% pure	1/4" dia. grinding media	3.72	303	0.21		358		3.85-3.95	7.4	35	775	> 1E+12	29.75
Aluminum oxide; 90% pure	1/4" dia. grinding media	3.6	275	0.22		337			7	16	775	> 1E+12	15.2
Concrete	Unreinforced	2.4	25.4-36.6	0.2		37.3-41.3		0.2-1.4	10.0-13.6	1.25-1.75	850-1150	1.00E+09	0.04
Diamond; natural	1/3 carat; industrial grade	3.51	700-1200	0.1-0.3		1050		3.4	0.11-1.23	1450-4650	520	1.00E+14	36000-90000
Gallium arsenide; {100} orient.	75mm wafer; prime grade	5.32	85	0.3		66		0.43	5.9	45.5	350	1.00E+06	8500-10000
Gallium arsenide; {110} orient.	75mm wafer; prime grade	5.32	122					0.31	5.9	45.5	350	1.00E+06	8500-10000
Gallium arsenide; {111} orient.	75mm wafer; prime grade	5.32	142					0.45	5.9	45.5	350	1.00E+06	8500-10000
Glass; borosilicate (Pyrex)	Plate	2.23	70	0.2		69		0.77	3.3	1.4	850	1.00E+13	8.50-17.00
Glass; soda-lime	Plate	2.5	69	0.23		69		0.75	9	1.7	840	1.00E+10-1.00E+11	1.75-2.35
Glass ceramic (Pyroceram)	Plate	2.6	120	0.25		123-370		1.6-2.1	6.5	3.3	975	2.00E+14	12.25-19.25
Graphite	Extruded	1.71	11			13.8-34.5			2.0-2.7	130-190	830	7E-06-2.0E-05	6.00-7.00
Graphite	Isostatically pressed	1.71-1.85	11.7			31-69			2.2-6.0	104-130	830	1E-05-1.8E-05	15.00-25.00
Silica; fused	Plate	2.2	73	0.17		104		0.79	0.4	1.4	740	> 1E+18	315-395
Silicon; {100} orientation	100 mm wafer; prime grade	2.33	129	0.28		81.8		0.95	2.5	141	700	2500	2075-2525
Silicon; {110} orientation	100 mm wafer; prime grade	2.33	168					0.9	2.5	141	700	2500	2075-2525
Silicon; {111} orientation	100 mm wafer; prime grade	2.33	187	0.36				0.82	2.5	141	700	2500	2075-2525
Silicon carbide	Hot pressed	3.3	207-483	0.17		230-825		4.8-6.1	4.6	80	670		
Silicon carbide	Sintered; 1/4" dia. grinding media	3.2	207-483	0.16		96-520		4.8	4.1	71	590		250
Silicon nitride	HIP; 1/4" dia. grinding media	3.3	304	0.3		700-1000		4.1-6.0	2.7	29	750	> 1E+12	875-1100
Silicon nitride	Reaction bonded	2.7	304	0.22		250-345		3.6	3.1	10	870	> 1E+12	
Silicon nitride	Sintered	3.3	304	0.28		414-650		5.3	3.1	33	1100	> 1E+12	

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Zirconia (3 mol% Y2O3)	Sintered; 15mm grinding media	6	205	0.31		800-1500		12-Jul	9.6	2.0-3.3	481	1.00E+10	125.00-175.00
Nitrile rubber	Raw/unprocessed												2.9
Nitrile rubber	Extruded sheet	0.98	0.0034			6.9-24.1	400-600		235	0.25		3.50E+08	9.90-10.50
Nitrile rubber	Calendered sheet	0.98	0.0034			6.9-24.1	400-600		235	0.25		3.50E+08	8.4
SBR rubber	Raw/unprocessed												1.2
SBR rubber	Extruded sheet	0.94	0.002-0.010			12.4-20.7	450-500		220	0.25		6.00E+11	7.60-12.20
SBR rubber	Calendered sheet	0.94	0.002-0.010			12.4-20.7	450-500		220	0.25		6.00E+11	6.8
Silicone rubber	Raw/unprocessed												5.5
Silicone rubber	Extruded sheet	1.1-1.6	1.1-1.6			10.3	100-800		270	0.23		1.00E+13	12.60-26.20
Silicone rubber	Calendered sheet	1.1-1.6	1.1-1.6			10.3	100-800		270	0.23		1.00E+13	31.50-38.50
Epoxy Resin	Raw form												3.00-4.00
Epoxy Resin	Cast	1.11-1.40	2.41			27.6-90.0	6-Mar	0.6	81-117	0.19	1050	1E+10-1E+13	
Nylon 6,6	Raw form												4.40-6.00
Nylon 6,6	Extruded; dry	1.14	1.59-3.79	0.39	55.1-82.8	94.5	15-80	2.5-3.0	144	0.24	1670	1E+12-1E+13	9.4
Nylon 6,6	Extruded; 50% rel. humidity	1.14	1.59-3.45	0.39	44.8-58.6	75.9	150-300	2.5-3.0	144	0.24	1670	1E+12-1E+13	9.4
Phenolic Resin	Raw form												6.50-12.00
Phenolic Resin	Cast	1.28	2.76-4.83			34.5-62.1	1.51-2		122	0.15	1590-1760	1E+09-1E+10	
Polybutylene terephthalate (PBT)	Raw form												4
Polybutylene terephthalate (PBT)	Sheet	1.34	1.93-3.00		55.6-60	56.6-60.0	50-300		108-171	0.18-0.29	1170-2300	4.00E+14	9.75
Polycarbonate (PC)	Raw form												4.85-5.30
Polycarbonate (PC)	Sheet	1.2	2.38	0.36	62.1	62.8-72.4	110-150	2.2	122	0.2	840	2.00E+14	7.00-10.00
Polyester (thermoset)	Raw form												1.50-4.40
Polyester (thermoset)	Cast	1.04-1.46	2.06-4.41			41.4-89.7	2.6	0.6	100-180	0.17	710-920	1.00E+13	
PEEK	Raw form	1.31	1.1		91	70.3-103	30-150		72-85			6.00E+14	90.00-110.00
LDPE	Raw form	0.925	0.172-0.282		9.0-14.5	8.3-31.4	100-650		180-400	0.33	2300	1E+15-5E+16	1.20-1.35
HDPE	Raw form	0.959	1.08		26.2-33.1	22.1-31.0	10-1200		106-198	0.48	1850	1E+15-5E+16	1.00-1.70
UHMWPE	Raw form	0.94	0.69		21.4-27.6	38.6-48.3	350-525		234-360	0.33		> 5E+14	3.00-8.50
PET	Raw form												1.90-2.10
PET	Sheet	1.35	2.76-4.14		59.3	48.3-72.4	30-300	5	117	0.15	1170	1.00E+12	3.30-7.70
PMMA	Raw form												2.4
PMMA	Calendered sheet	1.19	2.24-3.24		53.8-73.1	48.3-72.4	2.0-5.5	0.7-1.6	90-162	0.17-0.25	1460	> 1E+12	4.2
PMMA	Cell cast	1.19	2.24-3.24		53.8-73.1	48.3-72.4	2.0-5.5	0.7-1.6	90-162	0.17-0.25	1460	> 1E+12	5.85
Polypropylene (PP)	Raw form	0.905	1.14-1.55		31.0-37.2	31.0-41.4	100-600	3.0-4.5	146-180	0.12	1925	> 1E+14	0.85-1.65
Polystyrene (PS)	Raw form	1.05	2.28-3.28	0.33		35.9-51.7	1.2-2.5	0.7-1.1	90-150	0.13	1170	> 1E+14	1.00-1.10
PTFE	Raw form	2.17										1.00E+17	20.00-26.50
PTFE	Sheet	2.17	0.4-0.55	0.46		20.7-34.5	200-400		126-216	0.25	1050	1.00E+17	38
Polyvinyl chloride (PVC)	Raw form	1.3-1.58	2.41-4.14	0.38	40.7-44.8	40.7-51.7	40-80	2.0-4.0	90-180	0.15-0.21	1050-1460	> 1E+14	1.40-2.80
Aramid (Kevlar 49) fibers	Longitudinal direction	1.44	131			3600-4100	2.8		-2		1300		31
Carbon fibers; standard mod.	PAN; longitudinal direction	1.78	230			3800-4200	2		-0.6	11		1.70E-05	31.50-41.50
Carbon fibers; intermed. mod.	PAN; longitudinal direction	1.78	285			4650-6350	1.8		-0.6	15		1.50E-05	70.00-105.00
Carbon fibers; high modulus	PAN; longitudinal direction	1.81	400			2500-4500	0.6		-0.5	70		9.50E-06	175-225
E glass fibers	Longitudinal direction	2.58	72.5	0.22		3450	4.3		5	1.3	810	4.00E+14	1.90-3.30
Composite: aramid-epoxy	Aligned; Vf = 0.6; longitudinal	1.4	76	0.34		1380	1.8		-4				
Composite: aramid-epoxy	Aligned; Vf = 0.6; transverse	1.4	5.5			30	0.5		70				
Composite prepreg	Aramid fibers-epoxy matrix												55.00-62.00
Composite: HM carbon-epoxy	Aligned; Vf = 0.6; longitudinal	1.7	220	0.25		760	0.3		-0.5				
Composite: HM carbon-epoxy	Aligned; Vf = 0.6; transverse	1.7	6.9			28	0.4		32				
Composite prepreg	Stand. mod. carbon fibers-epoxy												40.00-60.00
Composite prepreg	Interm. mod. carbon fibers-epoxy												100-130
Composite prepreg	High mod. carbon fibers-epoxy												200-275
Composite: E glass-epoxy	Aligned; Vf = 0.6; longitudinal	2.1	45	0.19		1020	2.3		6.6				
Composite: E glass-epoxy	Aligned; Vf = 0.6; transverse	2.1	12			40	0.4		30				
Composite prepreg	E glass fibers-epoxy matrix												22
Wood; Douglas fir	12% moisture; parallel to grain	0.46-0.5	10.8-13.6			108			3.8-5.1		2900	1E+14-1E+16	0.54-0.60
Wood; Douglas fir	12% moisture; perpend. to grain	0.46-0.5	0.54-0.68			2.4			25.4-33.8	0.14	2900	1E+14-1E+16	0.54-0.60
Wood; red oak	12% moisture; parallel to grain	0.61-0.67	11.0-14.1			112			4.6-5.9		2900	1E+14-1E+16	2.55-3.35
Wood; red oak	12% moisture; perpend. to grain	0.61-0.67	0.55-0.71			7.2			30.6-39.1	0.18	2900	1E+14-1E+16	2.55-3.35