



PROPERTIES of METALS and NON-METALLIC SOLIDS

MATERIAL	*DENSITY LBS. / IN. ³	DENSITY LBS. / FT. ³	AVERAGE SPECIFIC HEAT BTU / LB. / °F	THERMAL CONDUCTIVITY BTU / HR. FT. ² / IN. / °F	MELTING POINT °F LOWEST	LATENT HEAT OF FUSION BTU / LB.	THERMAL EXPANSION IN. / IN. / °F X10-6
ALUMINUM 2024-T3	.100	173	.24	840	935	167	12.6
ALUMINUM 1100-0	.098	169	.24	1540	1190	169	13.1
ANTIMONY	.245	423	.23	-----	1166	25	8.5
ASBESTOS CEMENT BOARD	.070	121	.25 ±	5.2	-----	-----	-----
ASPHALT	.076	131	.40	5.3	250	40	-----
BEESWAX	.035	60.5	-----	-----	144	75	-----
BISMUTH	.354	612	.031	-----	520	23	7.4
BRASS, 70%	.308	532	.096	840	1750	-----	11.2
BRICKWORK & MASONARY	.076	131	.220	3-7	-----	-----	3-6
CARBON	.080	138	.280	165	6700	-----	0.3-2.4
CELLULOSE ACETATE	.047	81.2	.3-.5	1.2-2.3	-----	-----	61-83
CELLULOSE ACETATE BUTYRATE	.043	74.3	.3-.4	1.2-2.3	-----	-----	61-94
COPPER	.322	556	.095	2680	1981	91.1	9.8
DELIRIN	.051	88.1	.350	1.6	-----	-----	45
GLASS	.095	164	.20	7.5	2200 ±	-----	5
GOLD	.698	1206	.032	2030	1945	29.0	7.9
GRAPHITE	.075	130	.20	-----	-----	-----	-----
ICE	.0324	56.0	.53	11	32	144	28.3
INCOLOY 800	.290	501	.13	97	2475-2525	-----	7.9
INCONEL 600	.304	525	.126	103	2500	-----	7.4
IRON CAST	.260	449	.12	346	2150	-----	6.0
IRON WROUGHT	.278	480	.12	346	2800	-----	-----
LEAD SOLID	.410	708	.032	240	620	11.3	16.4
LEAD LIQUID	.387	669	.037	108	-----	-----	-----
MAGNESIUM	.063	109	.27	1106	1202	160	14
MAGNESIUM, 85%	.011	19	.222	17.6	5070	-----	-----
MgO (COMPACTED)	.112	194	.209	20	-----	-----	7.7
MICA	.102	176	.21	3.0	-----	-----	18
MONEL 400	.319	551	.11	151	2370	-----	7.7
NICKEL 200	.321	555	.12	436	2615	133	7.4
NICHROME (80% Ni.-20% Cr.)	.302	522	.11	104	2550	-----	7.3
NYLON	.040	69.1	.4	1.5	-----	-----	61-83
PAPER	.034	58.8	.45	.82	-----	-----	-----
PARAFFIN	.032	55.3	.69	1.6	133	63	-----
PHENOLIC	.046	79.5	.40	6-1.2	-----	-----	44-61
PITCH (HARD)	.048	83	-----	-----	300 ±	-----	-----
PLATINUM	.775	1339	.035	480	3225	49	4.9
POLYETHYLENE I & II	.035	60.5	.55	2.3	176-235 (Vicat point soft)	-----	94
POLYSTYRENE	.038	65.7	.32	.7-1.0	-----	-----	33-44
RUBBER	.044	76.0	.44	1.1	-----	-----	340
SILVER	.379	655	.057	2900	1760	38	10.8
SOLDER (50% Pb. - 50% Sn.)	.323	558	.051	310	361	17	13.1
STEATITE	.094	162	.20	17.5-23	-----	-----	4.5-5.5
STEEL MILD	.284	491	.12	460	2760	-----	6.7
STEEL S. 304	.286	494	.12	105	2550	-----	9.6
STEEL S. 430	.275	475	.11	155	2650	-----	6.0
SULFUR	.075	130	.175	1.9	246	17	36
SUGAR	.061	105	.30	-----	320	-----	-----
TALLOW	.035	60.0	-----	-----	90 ±	-----	-----
TANTALUM	.60	104	.035	375	5425	-----	3.57
TEFLON	.078	135	.25	1.7	-----	-----	55
TIN, SOLID	.263	454	.065	455	450	261	13
TIN, LIQUID	.253	437	.052	218	-----	-----	-----
TITANIUM 99.0%	.164	283	.13	112	3035	-----	4.7
TYPE METAL (85 Pb.-13% Sb.)	.387	669	.040	-----	500	14 ±	-----
VINYL	.046	79.5	.3-.5	8-2.0	-----	-----	28-100
WOOD (PINE)	.020	34	.45 ±	-----	-----	-----	-----
WOOD (OAK)	.029	50	.57	1.1	-----	-----	-----
ZINC	.258	445	.096	740	787	43.3	22.1

* At or near room temperature

± Approximate