Table 3 . . . Properties of Solids (*Concluded*)

Name or Description	Specific Heat: Btu per (lb) (F deg)	Specific Heat: Temp F	Specific Gravity	Thermal Conductivity[a]: Temp F	Thermal Conductivity[a]: k	Emissivity[b]: Temp F	Emissivity[b]: Ratio
Nickel steel	0.109						
Paper	0.324		0.70–1.15		0.075	66	0.924
Paraffin	0.6939	32–68	0.87–0.91	86	0.145		
Platinum (cast)			21.5	64	40.2		
Porcelain	0.22			329	0.945	72	0.924
Pyrites (copper)	0.131	66.2–122					
Pyrites (iron)	0.136	59–208.4					
Paint (lacquers, varnish)							
White lacquer						100–200	0.80–0.95
White enamel						73	0.906
Black lacquer						76	0.875
Black shellac						70	0.821
Aluminum paint						212	0.3–0.5
Plaster (rough lime)					0.25–0.05	50–190	0.91
Sawdust			0.21	68	0.042		
Rock salt	0.219	55.4–113					
Rubber (goods)	0.48		1.0–2.0	100	0.92	76	0.859
Saltpeter			1.07				
Sand	0.191		1.4–1.9	68	0.188		
Silica	0.316						
Steel (cold-drawn)	0.12		7.83	32	28.0	75	0.82
Stone	0.2						
Silver (cast)			10.4–10.6	64	244.0	75	0.82
Snow (fresh fallen)			0.125				
Tin (cast)	0.053		7.2–7.5	64	37.6	76	0.043–0.064
Tungsten	0.034		19.22				
Tar (bituminous)			1.20				
Wood (oak)	0.570		0.65–0.84		0.085–0.125	70	0.895
most woods vary between	0.45–0.65						
Ash			0.55–0.71				
Fir	0.65		0.40	86	0.094		
Elm			0.56				
Hickory			0.74–0.80				
Mahogany			0.56–0.85				
Maple			0.53–0.68	86	0.092		
Pine	0.67		0.43–0.67	86	0.065–0.085		
Spruce			0.45				
Walnut			0.59				
Wool			1.32	86	0.022		
Zinc (cast)			7.1	32	63.0		0.10
Zinc (galvanized)						75	0.22–0.28

[a] Note: k = Btu per (hr) (sq ft) (F deg per ft).
[b] The emissivity of a surface varies with its temperature, its degree of roughness, and, if a metal, its degree of oxidation. Therefore it must be remembered, emissivity for surfaces whose degree of roughness and oxidation is not specified is only an approximate value, and a wide variation is possible.

Table 4 . . . . Food Products Data

Product	Average Freezing Point F	Percent Water	Sp ht, Btu/(lb)(F deg): Above Freezing	Sp ht, Btu/(lb)(F deg): Below Freezing	Latent Heat of Fusion Btu/lb	Heat of Respiration Btu per (24 hr) (ton) (F deg)	
VEGETABLES							
Artichokes	29.1	83.7	0.87	0.45	120	40	10,140
Asparagus	29.8	93	0.94	0.48	134	40	11,500
Beans, string	29.7	88.9	0.91	0.47	128	32	4740
						40	6704
Beans, Lima	30.1	66.5	0.73	0.40	94		
Beans, dried		12.5	0.30	0.24	18		
Beets	31.1	90	0.86	0.47	129	32	1166
						40	1820
Broccoli	29.2	89.9	0.92	0.47	130	40	15,000
Brussels sprouts	31	84.9	0.88	0.46	122		
Cabbage	31.2	92.4	0.94	0.47	132		
Carrots	29.6	88.2	0.86	0.45	126	32	2130
						40	3470
Cauliflower	30.1	91.7	0.93	0.47	132		
Celery	29.7	93.7	0.95	0.48	135	32	2820
						40	4540
Corn (green)	28.9	75.5	0.80	0.43	108	32	5890
						40	8190

Table 4 . . . . Food Products Data (*Continued*)

Product	Average Freezing Point F	Percent Water	Sp ht, Btu/(lb)(F deg): Above Freezing	Sp ht, Btu/(lb)(F deg): Below Freezing	Latent Heat of Fusion Btu/lb	Heat of Respiration Btu per (24 hr) (ton) (F deg)	
Corn (dried)		10.5	0.28	0.23	15		
Cucumbers	30.5	96.1	0.97	0.49	137		
Eggplant	30.4	92.7	0.94	0.47	132		
Endive (escarole)	30.9	93.3	0.94	0.48	132		
Horseradish	26.4	73.4	0.78	0.42	104		
Kale	30.7	86.6	0.89	0.46	124		
Kohlrabi	30	90	0.92	0.47	128		
Lettuce	31.2	94.8	0.96	0.48	136	32	638
						40	7392
Mushrooms	30.2	91.1	0.93	0.47	130	32	6160
						50	22,000
Olives	28.5	75.2	0.80	0.42	108		
Onions	30.1	87.5	0.91	0.46	124	32	880
						50	1870
Parsnips	28.9	78.6	0.84	0.46	112		
Peas (green)	30	74.3	0.79	0.42	106	40	14,000
Peas (dried)		9.5	0.28	0.22	14		
Peppers (sweet)	30.1	92.4	0.94	0.47	132	40	1518
Potatoes (white)	28.9	77.8	0.82	0.43	111	32	660
						40	1430
Potatoes (sweet)	28.5	68.5	0.75	0.40	97	40	1710
Pumpkin	30.1	90.5	0.92	0.47	130		
Radishes	30.1	93.6	0.95	0.48	124		
Rhubarb	28.4	94.9	0.96	0.48	134		
Sauerkraut	26	89	0.92	0.47	129		
Spinach	30.3	92.7	0.94	0.48	132	40	8000
Squash	30.1	90.5	0.92	0.47	130		
Tomatoes (green)	30.4	94.7	0.95	0.48	134	60	6230
Tomatoes (ripening)	30.4	94.1	0.95	0.48	134	40	1260
Turnips	30.5	90.9	0.93	0.40	137	32	66
						40	572
Vegetables (mixed)	30	90	0.90	0.45	130		
MEATS AND FISH							
Bacon		20	0.50	0.30	29		
Beef (dried)		5–15	0.22–0.34	0.19–0.26	7–22		
Beef (fresh-lean)	29	68	0.77	0.40	100		
Beef (fresh-fat)	28		0.60	0.35	79		
Brined Meats			0.75				
Cod fish (fresh)	28		0.90	0.49	119		
Cut meats	29	65	0.72	0.40	95		
Fish (frozen)	28	70	0.76	0.41	101		
Fish (iced)		70	0.76	0.41	101		
Fish (dried)			0.56	0.34	65		
Hams and loins	27	60	0.68	0.38	86.5		
Lamb	29	58	0.67	0.30	83.5		
Livers	29	65.5	0.72	0.40	93.3		
Oyster (shell)	27	80.4	0.83	0.44	116		
Oysters (tub)	27	87	0.90	0.46	125		
Pork (fresh)	28	60	0.68	0.38	86.5		
Pork (smoked)		57	0.60	0.32			
Poultry (fresh)	27	74	0.79	0.37	106		
Poultry (frozen)	27	74	0.79	0.37	106		
Sausage (casings)			0.60				
Sausage (drying)	26	65.5	0.89	0.56	93		
Sausage (franks)	29	60	0.86	0.56	86		
Sausage (fresh)	26	65	0.89	0.56	93		
Sausage (smoked)	25	60	0.86	0.56	86		
Scallops	28	80.3	0.89	0.48	116		
Shrimp	28	70.8	0.83	0.45	119		
Veal	29	63	0.71	0.39	91		
MISCELLANEOUS							
Beer	28	92	1.0				
Bread		32–37	0.70	0.34	46–53		
Bread (dough)		58	0.75				
Butter	30–0	15	0.64	0.34	15		
Candy			0.93				
Caviar (tub)	20	55				40	3820
Cheese (American)	17	60	0.64	0.36	79	40	4680
Cheese (Camembert)	18	60	0.70	0.40	86	40	4920