

TABLE 2. CONDUCTIVITIES (k) AND CONDUCTANCES (C_a) OF BUILDING MATERIALS AND INSULATORS—Continued

The coefficients are expressed in Btu per hour per square foot per degree Fahrenheit per 1 in. thickness, unless otherwise indicated.

Material	Description	DENSITY (LB PER CU FT)	MEAN TEMP. (DEG FAHR)	CONDUCTIVITY (k) OR CONDUCTANCE (C _a)	RESISTIVITY OR RESISTANCE (R) $\left(\frac{1}{k}\right)$	AUTHORITY
AIR SPACE AND SURFACE COEFFICIENTS						
AIR SPACES	Over ¼-in. faced with ordinary building materials	.....	40	1.10†*	0.91	(4)
SURFACES, ORDINARY	Still air (f ₁)	.....	.....	1.65†*	0.61	(4)
	15 mph—(f ₀)	.....	.....	6.00†*	0.17	(4)
SURFACE, BRIGHT ALUMINUM	Still air (f ₁)	.....	60	1.18†	0.85	(4)
AIR SPACES FACED WITH BRIGHT ALUMINUM FOIL						
	Air space, faced one side with bright aluminum foil, over ¼-in. wide	.....	50	0.46†*	2.17	(4)
	Air space, faced one side with bright aluminum foil, ¼-in. wide	.....	50	0.62†	1.61	(4)
	Air space, faced both sides with bright aluminum foil, over ¼-in. wide	.....	50	0.41†*	2.44	(4)
	Air space, faced both sides with bright aluminum foil ¼-in. wide	.....	50	0.57†	1.75	(4)
	Air space divided in two with single curtain of bright aluminum foil (both sides bright)	.....	.....	.....	.....	.....
	Each space over ¼-in. wide	.....	50	0.23†*	4.35	(4)
	Each space ¼-in. wide	.....	50	0.31†	3.23	(4)
	Air space with multiple curtains of bright aluminum foil, bright on both sides, curtains more than ¼-in. apart, in standard construction	.....	.....	.....	.....	.....
	2 curtains, forming 3 spaces	.....	50	0.15†*	6.67	(4)
	3 curtains, forming 4 spaces	.....	50	0.11†*	9.09	(4)
	4 curtains, forming 5 spaces	.....	50	0.09†*	11.11	(4)
WOODS (Across Grain)						
BALSA		20.0	90	0.58	1.72	(1)
		8.8	90	0.38	2.63	(1)
		7.3	90	0.33	3.03	(1)
CALIFORNIA REDWOOD	0% moisture	22.0	75	0.66	1.53	(4)
	0% "	28.0	75	0.70	1.43	(4)
	8% "	22.0	75	0.70	1.43	(4)
	8% "	28.0	75	0.75	1.33	(4)
	16% "	22.0	75	0.74	1.35	(4)
	16% "	28.0	75	0.80	1.25	(4)
CYPRESS		28.7	86	0.67	1.49	(1)
DOUGLAS FIR	0% moisture	26.0	75	0.61	1.64	(4)
	0% "	34.0	75	0.67	1.49	(4)
	8% "	26.0	75	0.66	1.52	(4)
	8% "	34.0	75	0.75	1.33	(4)
	16% "	26.0	75	0.76	1.32	(4)
	16% "	34.0	75	0.82	1.22	(4)
EASTERN HEMLOCK	0% moisture	22.0	75	0.60	1.67	(4)
	0% "	30.0	75	0.76	1.32	(4)
	8% "	22.0	75	0.63	1.59	(4)
	8% "	30.0	75	0.81	1.23	(4)
	16% "	22.0	75	0.67	1.49	(4)
	16% "	30.0	75	0.85	1.18	(4)
HARD MAPLE	0% moisture	40.0	75	1.01	0.99	(4)
	0% "	46.0	75	1.05	0.95	(4)
	8% "	40.0	75	1.08	0.93	(4)
	8% "	46.0	75	1.13	0.89	(4)
	16% "	40.0	75	1.15	0.87	(4)
	16% "	46.0	75	1.21	0.83	(4)

For notes see Page 95.

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Material	Description	Density (Lb per Cu Ft)	MEAN TEMP. (DEG FAHR)	CONDUCTIVITY (k) OR CONDUCTANCE (C_a)	RESISTIVITY OR RESISTANCE (R) $(\frac{1}{k})$	AUTHORITY
WOODS—Continued						
LONGLEAF YELLOW PINE	0% moisture	30.0	75	0.76	1.32	(4)
	0% "	40.0	75	0.86	1.16	(4)
	8% "	30.0	75	0.83	1.21	(4)
	8% "	40.0	75	0.95	1.05	(4)
	16% "	30.0	75	0.89	1.12	(4)
	16% "	40.0	75	1.03	0.97	(4)
MAHOGANY		34.3	86	0.90	1.11	(1)
MAPLE		44.3	86	1.10	0.91	(1)
MAPLE OR OAK		---	---	1.15*	0.87	---
NORWAY PINE	0% moisture	22.0	75	0.62	1.61	(4)
	0% "	32.0	75	0.74	1.35	(4)
	8% "	22.0	75	0.68	1.47	(4)
	8% "	32.0	75	0.83	1.21	(4)
	16% "	22.0	75	0.74	1.35	(4)
	16% "	32.0	75	0.91	1.10	(4)
RED CYPRESS	0% moisture	22.0	75	0.67	1.49	(4)
	0% "	32.0	75	0.79	1.27	(4)
	8% "	22.0	75	0.71	1.41	(4)
	8% "	32.0	75	0.84	1.19	(4)
	16% "	22.0	75	0.74	1.35	(4)
	16% "	32.0	75	0.90	1.11	(4)
RED OAK	0% moisture	38.0	75	0.98	1.02	(4)
	0% "	48.0	75	1.18	0.85	(4)
	8% "	38.0	75	1.03	0.97	(4)
	8% "	48.0	75	1.24	0.81	(4)
	16% "	38.0	75	1.07	0.94	(4)
	16% "	48.0	75	1.29	0.78	(4)
SHORTLEAF YELLOW PINE	0% moisture	26.0	75	0.74	1.35	(4)
	0% "	36.0	75	0.91	1.10	(4)
	8% "	26.0	75	0.79	1.27	(4)
	8% "	36.0	75	0.97	1.03	(4)
	16% "	26.0	75	0.84	1.19	(4)
	16% "	36.0	75	1.04	0.96	(4)
SOFT ELM	0% moisture	28.0	75	0.73	1.37	(4)
	0% "	34.0	75	0.88	1.14	(4)
	8% "	28.0	75	0.77	1.30	(4)
	8% "	34.0	75	0.93	1.08	(4)
	16% "	28.0	75	0.81	1.24	(4)
	16% "	34.0	75	0.97	1.03	(4)
SOFT MAPLE	0% moisture	36.0	75	0.89	1.12	(4)
	0% "	42.0	75	0.95	1.05	(4)
	8% "	36.0	75	0.96	1.04	(4)
	8% "	42.0	75	1.02	0.98	(4)
	16% "	36.0	75	1.01	0.99	(4)
	16% "	42.0	75	1.09	0.92	(4)
SUGAR PINE	0% moisture	22.0	75	0.54	1.85	(4)
	0% "	28.0	75	0.59	1.70	(4)
	8% "	22.0	75	0.71	1.41	(4)
	8% "	28.0	75	0.65	1.54	(4)
	16% "	22.0	75	0.78	1.28	(4)
	16% "	28.0	75	0.96	1.04	(1)
VIRGINIA PINE		34.3	86	0.96	1.04	(1)
WEST COAST HEMLOCK	0% moisture	22.0	75	0.68	1.47	(4)
	0% "	30.0	75	0.79	1.27	(4)
	8% "	22.0	75	0.73	1.37	(4)
	8% "	30.0	75	0.85	1.18	(4)
	16% "	22.0	75	0.78	1.28	(4)
	16% "	30.0	75	0.91	1.10	(4)
WHITE PINE		31.2	86	0.78	1.28	(1)
YELLOW PINE		---	---	1.00	1.00	(3)
YELLOW PINE OR FIR		---	---	0.80*	1.25	---

For notes see Page 95.