

HEATING VENTILATING AIR CONDITIONING GUIDE 1938

TABLE 2. CONDUCTIVITIES (*k*) AND CONDUCTANCES (*C*) 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 (<i>k</i>) OR CONDUCTANCE (<i>C</i>)	RESISTIVITY ($\frac{1}{k}$) OR RESISTANCE ($\frac{1}{C}$)	AUTHORITY
AIR SPACES FACED WITH BRIGHT ALUMINUM FOIL—Continued	Air space divided in two with single curtain of bright aluminum foil (both sides bright)	—	50	0.23†	4.35	(4)
	Each space over 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, air circulation between spaces prevented:	—	50	0.15†	6.78	(4)
	2 curtains, forming 3 spaces	—	50	0.11†	9.22	(4)
	4 curtains, forming 5 spaces	—	50	0.09†	11.66	(4)
SPACES FACED WITH NON- METALLIC REFLECTIVE SURFACE	Fabric with non-metallic reflective surface (¾ in. thick) placed in center of a 1½ in. air space	—	70	0.33†	3.03	(4)
	Core of fiber board coated two sides with non-metallic reflective surface (¾ in. thick) placed in space having approximately ¾ in. air space on each side	23.4	70	0.27†	3.70	(3)
	Fiber board coated one side with non-metallic reflective surface (¾ in. thick) placed in space having approximately ¾ in. air space on each side	—	75	0.49†	2.04	(3)
	Air space divided in two with fabric faced both sides with non-metallic reflective surface, each space over ¼-in. wide	—	40	0.33†	3.03	(4)
	Air space over ¼-in. wide faced one side with non-metallic reflective surface	—	40	0.67†	1.49	(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)
	8% "	28.0	75	0.70	1.43	(4)
	8% "	22.0	75	0.70	1.43	(4)
	16% "	28.0	75	0.75	1.33	(4)
	16% "	22.0	75	0.74	1.35	(4)
CYPRESS	0% moisture	28.7	86	0.67	1.49	(1)
	8% "	26.0	75	0.61	1.64	(4)
	8% "	34.0	75	0.67	1.49	(4)
	16% "	26.0	75	0.66	1.52	(4)
	16% "	34.0	75	0.75	1.33	(4)
DOUGLAS FIR	0% moisture	26.0	75	0.76	1.32	(4)
	8% "	34.0	75	0.82	1.22	(4)
	8% "	22.0	75	0.60	1.67	(4)
	16% "	30.0	75	0.76	1.32	(4)
	16% "	22.0	75	0.63	1.59	(4)
EASTERN HEMLOCK	0% moisture	30.0	75	0.81	1.23	(4)
	8% "	22.0	75	0.67	1.49	(4)
	8% "	30.0	75	0.85	1.18	(4)
	16% "	40.0	75	1.01	0.99	(4)
	16% "	46.0	75	1.08	0.93	(4)
HARD MAPLE	0% moisture	40.0	75	1.13	0.89	(4)
	8% "	40.0	75	1.15	0.87	(4)
	8% "	46.0	75	1.21	0.83	(4)
	16% "	46.0	75	1.21	0.83	(4)
	16% "	46.0	75	1.21	0.83	(4)

For notes see Page 97.

CHAPTER 5. HEAT TRANSMISSION COEFFICIENTS AND TABLES

TABLE 2. CONDUCTIVITIES (*k*) AND CONDUCTANCES (*C*) 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 (<i>k</i>) OR CONDUCTANCE (<i>C</i>)	RESISTIVITY ($\frac{1}{k}$) OR RESISTANCE ($\frac{1}{C}$)	AUTHORITY
WOODS—Continued LONGLEAF YELLOW PINE	0% moisture	30.0	75	0.76	1.32	(4)
	8% "	40.0	75	0.86	1.16	(4)
	8% "	30.0	75	0.83	1.21	(4)
	16% "	40.0	75	0.95	1.05	(4)
	16% "	30.0	75	0.89	1.12	(4)
MAHOGANY	0% moisture	40.0	75	1.03	0.97	(4)
	8% "	34.3	86	0.90	1.11	(1)
	8% "	44.3	86	1.10	0.91	(1)
	16% "	—	—	1.15*	0.87	—
	16% "	—	—	0.62	1.61	(4)
MAPLE	0% moisture	22.0	75	0.62	1.61	(4)
	8% "	32.0	75	0.74	1.35	(4)
	8% "	22.0	75	0.68	1.47	(4)
	16% "	32.0	75	0.83	1.21	(4)
	16% "	22.0	75	0.74	1.35	(4)
MAPLE OR OAK	0% moisture	32.0	75	0.91	1.10	(4)
	8% "	22.0	75	0.67	1.49	(4)
	8% "	32.0	75	0.79	1.27	(4)
	16% "	22.0	75	0.71	1.41	(4)
	16% "	32.0	75	0.84	1.19	(4)
NORWAY PINE	0% moisture	22.0	75	0.74	1.35	(4)
	8% "	32.0	75	0.91	1.10	(4)
	8% "	22.0	75	0.67	1.49	(4)
	16% "	32.0	75	0.79	1.27	(4)
	16% "	22.0	75	0.71	1.41	(4)
RED CYPRESS						