

These constants are expressed in Btu per (hour) (square foot) (Fahrenheit degree temperature difference). Conductivities (k) are per inch thickness and conductances (C) are for thickness or construction stated, not per inch thickness.

Design Heat Transmission Coefficients

Material	Description	Density (lb per Cu Ft)	Mean Temp F	Conduc- tivity (k)	Conduct- ance (C)	Resistance ^a (R)	
						Per inch thickness (1/k)	For thick- ness listed (1/C)
INSULATING MATERIALS BOARDS AND SLABS (Continued)	Expanded polystyrene.....	1.6	75	0.29	—	3.45	—
			70	0.28	—	3.67	—
			30	0.25	—	4.00	—
			0	0.23	—	4.35	—
			-60	0.20	—	5.00	—
	Mineral wool with resin binder.....	15	90	0.29	—	3.45	—
			60	0.28	—	3.67	—
			30	0.27	—	3.70	—
			0	0.25	—	4.00	—
			-30	0.24	—	4.17	—
			-60	0.23	—	4.35	—
	Mineral wool with asphalt binder.....	15	60	0.31	—	3.88	—
			30	0.30	—	3.93	—
			0	0.29	—	3.45	—
			-30	0.27	—	3.70	—
	Wood or cane fiberboard.....		75	—	0.84	—	1.19
	Acoustical tile ^b 1 in.	—	75	—	0.58	—	1.78
	Acoustical tile ^b 1 in.	15	75	0.35	—	2.88	—
	Interior finish (plank, tile)..... 1 in.	15	75	—	0.70	—	1.43
	Insulating Roof Deck.....		75	—	0.24	—	4.17
	Approximately..... 1 1/2 in.	—	75	—	0.18	—	4.69
	Approximately..... 2 in.	—	75	—	0.12	—	8.33
	Approximately..... 3 in.	—	75	—	—	—	—
	Wood shredded (cemented in preformed slabs).....	22	75	0.55	—	1.82	—
LOOSE FILL	Macerated paper or pulp products.....	2.5-3.5	75	0.28	—	3.67	—
	Mineral wool (glass, slag, or rock).....	2.0-5.0	90	0.30	—	3.33	—
			75	0.30	—	3.33	—
			60	0.27	—	3.70	—
			30	0.25	—	4.00	—
			0	0.23	—	4.35	—
			-30	0.20	—	5.00	—
			-60	0.18	—	5.68	—
	Perlite (expanded).....	5.0-8.0	90	0.38	—	2.63	—
			75	0.38	—	2.63	—
			60	0.37	—	2.70	—
			30	0.35	—	2.88	—
			0	0.33	—	3.03	—
		10.0	-115	0.30	—	3.33	—
		7.5	-115	0.26	—	3.84	—
		5.0	-115	0.23	—	4.35	—
		3.0	-115	0.20	—	5.00	—
	Sawdust or shavings.....	0.8-1.5	75	0.45	—	2.22	—
	Silica aerogel.....	7.6	90	0.17	—	5.88	—
			60	0.16	—	6.25	—
			30	0.15	—	6.67	—
			0	0.15	—	6.67	—
			-30	0.14	—	7.14	—
			-60	0.13	—	7.69	—
	Vermiculite (expanded).....	7.0-8.2	90	0.48	—	2.08	—
			75	0.48	—	2.08	—
			60	0.46	—	2.18	—
			30	0.44	—	2.27	—
			0	0.42	—	2.38	—
			-30	0.40	—	2.50	—
			-60	0.38	—	2.63	—
	Wood fiber: redwood, hemlock, or fir.....	2.0-3.5	75	0.30	—	3.33	—
	Wood fiber: redwood bark.....	3	90	0.31	—	3.23	—
		4	90	0.28	—	3.67	—
		4.5	60	0.26	—	3.84	—
			30	0.25	—	4.00	—
			0	0.23	—	4.35	—
			-30	0.21	—	4.78	—
			-60	0.20	—	5.00	—
	ROOF INSULATION ^a	Preformed, for use above deck.....		75	—	0.72	—
Approximately..... 1 in.		—	75	—	0.36	—	2.78
Approximately..... 1 in.		—	75	—	0.24	—	4.17
Approximately..... 1 1/2 in.		—	75	—	0.19	—	5.26
Approximately..... 2 in.		—	75	—	0.15	—	6.67
Approximately..... 2 1/2 in.		—	75	—	0.12	—	8.33
Approximately..... 3 in.		—	75	—	—	—	—
Cellular glass.....		75	0.39	—	2.56	—	