TABLE 3. CONDUCTIVITIES (k) AND CONDUCTANCES (C) USED IN CALCULATING HEAT LOSS COEFFICIENTS (U) IN TABLES 4 TO 16

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

MATERIAL	DESCRIPTION	CONDUCTIVITY OR CONDUCTANCE		RESISTANCE
		(k)	(C)	$\left(\frac{1}{k}\right)$ or $\left(\frac{1}{C}\right)$
AIR SPACES				
Bounded by ordinary materials	Vertical[a], ¾ in. or more in width	.....	1.10	0.91
Bounded by aluminum foil	Vertical[a], ¾ in. or more in width	.....	0.46	2.17
EXTERIOR FINISHES (Frame Walls)				
Brick Veneer	4 in. thick (nominal)	.....	.....	0.44
Stucco (1 in.)		12.50	.....	0.08
Wood Shingles		.....	1.28	0.78
Yellow Pine Lap Siding		.....	1.28	0.78
INSULATING MATERIALS				
Aluminum Foil	See Air Spaces	.....	.....	.....
Bats	Enclosed both sides	0.27	.....	3.70
Blankets	Made from mineral or vegetable fibers or animal hair	0.27	.....	3.70
Corkboard	Pure, no added binder	0.30	.....	3.33
Insulating Board		0.33	.....	3.03
Mineral Wool		0.27	.....	3.70
Vermiculite		0.48	.....	2.08
INTERIOR FINISHES				
Composition Wallboard	⅜ in. to ½ in. thick	0.50	.....	2.00
Gypsum Plaster		3.30	.....	0.30
Gypsum Board (⅜ in.)	Plain or decorated	.....	3.70	0.27
Gypsum Lath (⅜ in.) and Plaster	Plaster thickness assumed ½ in.	.....	2.4	0.42
Insulating Board (½ in.)	Plain or decorated	.....	.....	1.52
Insulating Board Lath (⅜ in.) and Plaster	Plaster thickness assumed ½ in.	.....	.....	1.67
Insulating Board Lath (1 in.) and Plaster	Plaster thickness assumed ½ in.	.....	.....	3.18
Metal Lath and Plaster	Plaster thickness assumed ¾ in.	.....	4.40	0.23
Plywood (⅜ in.)	Plain or decorated	.....	.....	0.47
Wood Lath and Plaster		.....	2.50	0.40
MASONRY MATERIALS				
Brick	Adobe	3.56	.....	0.28
Brick	Common	5.00	.....	0.20
Brick	Face	9.20	.....	0.11
Cement Mortar		12.00	.....	0.08
3 in. Clay tile (hollow)		.....	1.28	0.78
4 in. Clay tile (hollow)		.....	1.00	1.00
6 in. Clay tile (hollow)		.....	0.64	1.57
8 in. Clay tile (hollow)		.....	0.60	1.67
10 in. Clay tile (hollow)		.....	0.58	1.72
12 in. Clay tile (hollow)		.....	0.40	2.50
16 in. Clay tile (hollow)		.....	0.31	3.23
Concrete	Light weight aggregate[b]	2.50	.....	0.40
Concrete	Sand and gravel aggregate	12.00	.....	0.08
3 in. Concrete blocks	Hollow, cinder aggregate	.....	1.28	0.78
4 in. Concrete blocks	Hollow, cinder aggregate	.....	1.00	1.00
8 in. Concrete blocks	Hollow, gravel aggregate	.....	1.00	1.00
12 in. Concrete blocks	Hollow, gravel aggregate	.....	0.80	1.25
8 in. Concrete blocks	Hollow, cinder aggregate	.....	0.60	1.66
12 in. Concrete blocks	Hollow, cinder aggregate	.....	0.53	1.88
8 in. Concrete blocks	Hollow, light weight aggregate[b]	.....	0.50	2.00
12 in. Concrete blocks	Hollow, light weight aggregate[b]	.....	0.47	2.13
Gypsum fiber concrete	87½ per cent gypsum and 12½ per cent wood chips	1.66	.....	0.60
3 in. Gypsum tile	Hollow	.....	0.61	1.64
4 in. Gypsum tile	Hollow	.....	0.46	2.18
Stucco		12.50	.....	0.08
Tile and Terrazzo	For flooring	12.00	.....	0.08

[a]Conductance values for horizontal air spaces depend on whether the heat flow is upward or downward, but in most cases it is sufficiently accurate to use the same values for horizontal as for vertical air spaces.

[b]Expanded slag, burned clay or pumice.

TABLE 3. CONDUCTIVITIES (k) AND CONDUCTANCES (C) USED IN CALCULATING HEAT LOSS COEFFICIENTS (U) IN TABLES 4 TO 16—Concluded

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

MATERIAL	DESCRIPTION	CONDUCTIVITY OR CONDUCTANCE		RESISTANCE
		(k)	(C)	$\left(\frac{1}{k}\right)$ or $\left(\frac{1}{C}\right)$
ROOFING MATERIALS				
Asbestos Shingles		.....	6.00	0.17
Asphalt Shingles		.....	6.50	0.15
Built-up Roofing	Assumed thickness ⅜ in.	.....	3.53	0.28
Heavy Roll Roofing		.....	6.50	0.15
Slate		10.00	.....	0.10
Wood Shingles		.....	1.28	0.78
SHEATHING				
Gypsum (½ in.)		.....	2.82	0.35
Insulating Board ($^{25}/_{32}$ in.)		.....	.....	2.37
Plywood (⅜ in.)		.....	.....	0.39
Fir or Yellow Pine (1 in.)	Actual thickness $^{25}/_{32}$ in.	.....	.....	0.98
Fir, plus building paper	Actual thickness $^{25}/_{32}$ in.	.....	0.86	1.16
SURFACES				
Still air	Ordinary non-reflective materials, vertical	.....	1.65	0.61
15 mph wind velocity	Ordinary non-reflective materials, vertical	.....	6.00	0.17
WOODS				
Fir sheathing (1 in.) building paper and Yellow Pine lap siding		.....	0.50	2.00
Maple or Oak		1.15	.....	0.87
Yellow Pine or Fir		0.80	.....	1.25

coefficients involving upward heat flow through horizontal and sloping air spaces bounded on one side by aluminum foil applied to plasterboard, as for similar vertical air spaces.

As already stated, a conductance value of 1.10 was similarly used in all cases for calculating the coefficients of construction involving vertical, horizontal and sloping air spaces bounded on both sides by ordinary building materials.

PRACTICAL COEFFICIENTS

For practical purposes it is necessary to have average coefficients that may be applied to various materials and types of construction without the necessity of making tests on the individual material or combination of materials. In Table 2 coefficients are given for a group of materials which have been selected from various sources. Wherever possible the properties of material and conditions of tests are given. However, in selecting and applying these values to any construction a reasonable amount of caution is necessary; variations will be found in the coefficients for the same materials, which may be partly due to different test methods used, but which are largely due to variations in materials. The coefficients which have been used for the calculation of over-all coefficients are given in Table 3.

It should be recognized in these tables of calculated coefficients that space limitations will not permit the inclusion of all the combinations of materials that are used in building construction and the varied applications of insulating materials to these constructions. Typical examples are given