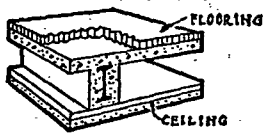
TABLE 13. COEFFICIENTS OF TRANSMISSION (U) OF CONCRETE CONSTRUCTION FLOORS AND CEILINGS

Coefficients are expressed in Btu per (hour) (square foot) (Fahrenheit degree difference in temperature between the air on the two sides), and are based on still air (no wind) conditions on both sides.

TYPE OF CEILING 	THICKNESS OF CONCRETE (INCHES)	TYPE OF FLOORING					NUMBER
		No Flooring (Concrete Bare)	Tile[a] or Terrazzo Flooring on Concrete	⅛ In. Asphalt Tile[b] Directly on Concrete	Parquett[c] Flooring in Mastic on Concrete	Double Wood Floor on Sleepers[d]	
		A	B	C	D	E	
No Ceiling	3	0.68	0.65	0.66	0.45	0.25	1
	6	0.59	0.56	0.58	0.41	0.23	2
	10	0.50	0.48	0.49	0.36	0.22	3
½ in. Plaster Applied to Underside of Concrete	3	0.62	0.59	0.60	0.43	0.24	4
	6	0.54	0.52	0.53	0.39	0.22	5
	10	0.46	0.44	0.45	0.34	0.21	6
Metal Lath and Plaster[e]—Suspended or Furred	3	0.38	0.37	0.37	0.30	0.19	7
	6	0.35	0.34	0.35	0.28	0.18	8
	10	0.32	0.31	0.32	0.26	0.17	9
Gypsum Board (⅜ in.) and Plaster[f]—Suspended or Furred	3	0.36	0.35	0.35	0.28	0.19	10
	6	0.33	0.32	0.33	0.27	0.18	11
	10	0.30	0.29	0.30	0.24	0.17	12
Insulating Board Lath (½ in.) and Plaster[f]—Suspended or Furred	3	0.25	0.24	0.25	0.21	0.15	13
	6	0.23	0.23	0.23	0.20	0.15	14
	10	0.22	0.21	0.22	0.19	0.14	15

[a] Thickness of tile assumed to be 1 in.

[b] Conductivity of asphalt tile assumed to be 3.1.

[c] Thickness of wood assumed to be ⅝ in.; thickness of mastic, ⅛ in. (k = 4.5). Col. D may also be used for concrete covered with carpet.

[d] Based on ⅝ in. yellow pine or fir sub-flooring and ⅜ in. hardwood finish flooring with an air space between sub-floor and concrete.

[e] Thickness of plaster assumed to be ¾ in.

[f] Thickness of plaster assumed to be ½ in.

[g] For other thickness of concrete, interpolate.

perature of the room surfaces *seen* by the glass. Special consideration should be given to those cases where the glass *sees* interior surfaces at temperatures differing greatly from the room air temperature, *i.e.*, such cases as in sun rooms, greenhouses, and some panel heated rooms, or where there is an unusual amount of air motion in the vicinity of the glass. Although based on zero outdoor air, the values change only slightly with different design temperatures, being about 5 percent greater for a 30 F outdoor design temperature.

In computing the Table 20 values, consideration of the dependence of the indoor surface conductances upon temperature and direction of heat flow leads to surface conductances averaging about 1.50 for block and vertical glass, and about 1.80 for horizontal glass, as compared to the

TABLE 14. COEFFICIENTS OF TRANSMISSION (U) OF CONCRETE BASEMENT FLOORS ON GROUND WITH VARIOUS TYPES OF FINISH FLOORING

U = 0.10[a] Btu per (hr) (sq ft) (Fahrenheit degree temperature difference between the ground and the air over the floor).

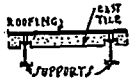
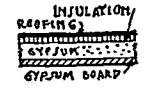
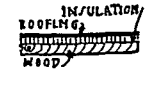
(See text p. 185.)

[a] Since few data are available, a coefficient of 0.10 is frequently used for all types of basement concrete floors on the ground, with or without insulation. For basement wall below grade, use the same average coefficient (0.10). A lower ground temperature should, however, be used for walls than floors as explained in Chapter 12. For further data see A.S.H.V.E. RESEARCH REPORT No. 1213—Heat Loss Through Basement Walls and Floors, by F. C. Houghten, S. I. Taimuty, Carl Gutberlet and C. J. Brown (A.S.H.V.E. TRANSACTIONS, Vol. 48, 1942, p. 369).

TABLE 15. COEFFICIENTS OF TRANSMISSION (U) OF FLAT ROOFS COVERED WITH BUILT-UP ROOFING. NO CEILING—UNDER SIDE OF ROOF EXPOSED

(See Table 16 for Flat Roofs with Ceilings)

These coefficients are expressed in Btu per (hour) (square foot) (Fahrenheit degree difference in temperature between the air on the two sides), and are based on an outside wind velocity of 15 mph.

TYPE OF ROOF DECK	THICKNESS OF ROOF DECK (INCHES)	INSULATION ON TOP OF DECK (COVERED WITH BUILT-UP ROOFING)								NUMBER
		No Insulation	Insulating Board (Thickness Below)				Corkboard (Thickness Below)			
			½ In.	1 In.	1½ In.	2 In.	1 In.	1½ In.	2 In.	
		A	B	C	D	E	F	G	H	
Flat Metal Roof Deck[a] 		0.94	0.39	0.24	0.18	0.14	0.23	0.17	0.13	1
Precast Cement Tile 	1½ in.	0.84	0.37	0.24	0.17	0.14	0.22	0.16	0.13	2
Concrete 	2 in.	0.82	0.36	0.24	0.17	0.14	0.22	0.16	0.13	3
	4 in.	0.72	0.34	0.23	0.17	0.13	0.21	0.16	0.12	4
	6 in.	0.65	0.33	0.22	0.16	0.13	0.21	0.15	0.12	5
Gypsum Fiber Concrete[b] on ½ in. Gypsum Board 	2½ in.	0.38	0.24	0.18	0.14	0.12	0.17	0.13	0.11	6
	3½ in.	0.31	0.21	0.16	0.13	0.11	0.15	0.12	0.10	7
Wood[c] 	1 in.	0.49	0.28	0.20	0.15	0.12	0.19	0.14	0.12	8
	1½ in.	0.37	0.24	0.17	0.14	0.11	0.17	0.13	0.11	9
	2 in.	0.32	0.22	0.16	0.13	0.11	0.16	0.12	0.10	10
	3 in.	0.23	0.17	0.14	0.11	0.096	0.13	0.11	0.091	11

[a] Coefficient of transmission of bare corrugated iron (no roofing) is 1.50 Btu per (hr) (sq ft of projected area) (F deg difference in temperature) based on an outside wind velocity of 15 mph.

[b] 87½ percent gypsum, 12½ percent wood fiber. Thickness indicated includes ½ in. gypsum board.

[c] Nominal thicknesses specified—actual thicknesses used in calculations.