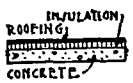
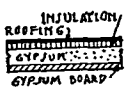
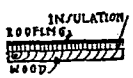
TABLE 15. COEFFICIENTS OF TRANSMISSION (*U*) OF FLAT ROOFS COVERED WITH BUILT-UP ROOFING. NO CEILING—UNDER SIDE OF ROOF EXPOSED*

(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)	NO INSULATION	INSULATION ON TOP OF DECK (COVERED WITH BUILT-UP ROOFING)							NUMBER
			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[c] 		0.94	0.39	0.24	0.18	0.14	0.23	0.17	0.13	
Precast Cement Tile 	1½ in.	0.84	0.3	0.24	0.17	0.14	0.22	0.16	0.13	2
Concrete 	2 in. 4 in. 6 in.	0.82 0.72 0.65	0.36 0.34 0.33	0.24 0.23 0.22	0.17 0.17 0.16	0.14 0.13 0.13	0.22 0.21 0.21	0.16 0.16 0.15	0.13 0.12 0.12	3 4 5
Gypsum Fiber Concrete[b] on ½ in. Gypsum Board 	2½ in. 3½ in.	0.38 0.31	0.24 0.21	0.18 0.16	0.14 0.13	0.12 0.11	0.17 0.15	0.13 0.12	0.11 0.10	6 7
Wood[c] 	1 in. 1½ in. 2 in. 3 in.	0.49 0.37 0.32 0.23	0.28 0.24 0.22 0.17	0.20 0.17 0.16 0.14	0.15 0.14 0.13 0.11	0.12 0.11 0.11 0.096	0.19 0.17 0.16 0.13	0.14 0.13 0.12 0.11	0.12 0.11 0.10 0.091	8 9 10 11

* See Table 5, Note a.

[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.

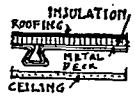
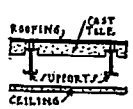
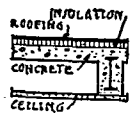
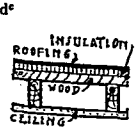
[b] 87½ percent gypsum, 12½ percent wood fiber. Thickness indicated includes ½ in. gypsum board.

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

TABLE 16. COEFFICIENTS OF TRANSMISSION (*U*) OF FLAT ROOFS COVERED WITH BUILT-UP ROOFING. WITH LATH AND PLASTER CEILINGS[a]*

(See Table 15 for Flat Roofs with No 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)	NO INSULATION	INSULATION ON TOP OF DECK (COVERED WITH BUILT-UP ROOFING)							NUMBER
			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 		0.46	0.27	0.19	0.15	0.12	0.18	0.14	0.11	12
Precast Cement Tile 	1½ in.	0.43	0.26	0.19	0.15	0.12	0.18	0.14	0.11	13
Concrete 	2 in. 4 in. 6 in.	0.42 0.40 0.37	0.26 0.25 0.24	0.19 0.18 0.18	0.14 0.14 0.14	0.12 0.12 0.11	0.18 0.17 0.17	0.14 0.13 0.13	0.11 0.11 0.11	14 15 16
Gypsum Fiber Concrete[b] on ½ in. Gypsum Board 	2½ in. 3½ in.	0.27 0.23	0.19 0.17	0.15 0.14	0.12 0.11	0.10 0.097	0.14 0.13	0.12 0.11	0.097 0.091	17 18
Wood[c] 	1 in. 1½ in. 2 in. 3 in.	0.31 0.26 0.24 0.18	0.21 0.19 0.17 0.14	0.16 0.15 0.14 0.12	0.13 0.12 0.11 0.10	0.11 0.10 0.097 0.087	0.15 0.14 0.13 0.11	0.12 0.11 0.11 0.095	0.10 0.095 0.092 0.082	19 20 21 22

* See Table 5, Note a.

[a] Calculations based on metal lath and plaster ceilings, but coefficients may be used with sufficient accuracy for gypsum lath or wood lath and plaster ceilings. It is assumed that there is an air space between the under side of the roof deck and the upper side of the ceiling.

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

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