

HEATING VENTILATING AIR CONDITIONING GUIDE 1938

TABLE 4. COEFFICIENTS OF TRANSMISSION (*U*) OF MASONRY WALLS WITH VARIOUS TYPES OF VENEERS^a

Coefficients are expressed in Btu per hour per square foot per degree Fahrenheit difference in temperature between the air on the two sides, and are based on a wind velocity of 15 mph.

TYPICAL CONSTRUCTION	TYPE OF WALL		WALL No.
	FACING	BACKING	
	4 in. Brick Veneer ^a	6 in. Hollow Tile	37
		8 in. Hollow Tile	38
		10 in. Hollow Tile	39
		12 in. Hollow Tile	40
	4 in. Brick Veneer ^a	6 in. Concrete	41
		10 in. Concrete	42
		16 in. Concrete	43
	4 in. Brick Veneer ^a	8 in. Cinder Blocks	44
		8 in. Cinder Blocks—Cores filled with granulated cork, 5.12 lb per cu ft.	45
		12 in. Cinder Blocks	46
		12 in. Cinder Blocks—Cores filled with granulated cork, 5.24 lb per cu ft.	47
		8 in. Concrete Blocks	48
		8 in. Concrete Blocks—Cores filled with granulated cork, 5.14 lb per cu ft.	49
		12 in. Concrete Blocks	50
		8 in. Haydite Block	51
		8 in. Haydite Block—Cores filled with granulated cork, 5.06 lb per cu ft.	52
		12 in. Haydite Block	53
		12 in. Haydite Block—Cores filled with granulated cork, 5.6 per cu ft.	54
	4 in. Cut-Stone Veneer ^a	8 in. Common Brick	55
		12 in. Common Brick	56
		16 in. Common Brick	57
	4 in. Cut-Stone Veneer ^a	6 in. Hollow Tile	58
		8 in. Hollow Tile	59
		10 in. Hollow Tile	60
		12 in. Hollow Tile	61
	4 in. Cut-Stone Veneer ^a	6 in. Concrete	62
		10 in. Concrete	63
		16 in. Concrete	64

^aComputed from factors marked by * in Table 2.

^bBased on the actual thickness of 2-in. furring strips.

^cThe 6-in., 8-in. and 10-in. tile figures are based on two cells in the direction of heat flow. The 12-in. tile is based on three cells in the direction of heat flow.

CHAPTER 5. HEAT TRANSMISSION COEFFICIENTS AND TABLES

INTERIOR FINISH

UNINSULATED WALLS						INSULATED WALLS					
Plain walls—no interior finish	Plaster (1/2 in.) on walls	Plaster on wood lath—furred	Plaster (1/2 in.) on metal lath—furred	Plaster (1/2 in.) on plaster board (1/2 in.) furred	No plaster—desiccated rigid or building board interior finish (1/2 in.)—furred	Plaster (1/2 in.) on rigid insulation (1/2 in.)—furred	Plaster (1/2 in.) on rigid insulation (1 in.)—furred	Plaster (1/2 in.) on cork board (1 1/4 in.) set in cement mortar (1/2 in.)	Plaster (1/2 in.) on metal lath attached to furring strips—furred space (over 1/2 in.)—faced outside with rigid aluminum foil	Plaster (1/2 in.) on metal lath attached to furring strips (2 in.)—rock wool fill (1 1/2 in.) ^b	Plaster (1/2 in.) on metal lath attached to furring strips—flexible insulation (1/2 in.) between furring strips (one air space)
A	B	C	D	E	F	G	H	I	J	K	L
0.36	0.34	0.24	0.25	0.24	0.19	0.19	0.16	0.13	0.19	0.11	0.17
0.34	0.33	0.24	0.25	0.24	0.19	0.18	0.14	0.12	0.19	0.11	0.17
0.34	0.32	0.23	0.24	0.23	0.19	0.18	0.14	0.12	0.19	0.11	0.17
0.27	0.26	0.20	0.21	0.20	0.16	0.16	0.13	0.11	0.16	0.10	0.15
0.57	0.53	0.33	0.35	0.33	0.24	0.23	0.17	0.14	0.24	0.13	0.21
0.48	0.45	0.30	0.31	0.30	0.22	0.22	0.16	0.14	0.22	0.12	0.20
0.39	0.37	0.26	0.27	0.26	0.20	0.19	0.15	0.13	0.20	0.11	0.18
0.35	0.33	0.24	0.25	0.24	0.19	0.18	0.14	0.12	0.19	0.11	0.17
0.20	0.19	0.16	0.16	0.16	0.13	0.13	0.11	0.10	0.13	0.09	0.12
0.31	0.30	0.22	0.23	0.22	0.18	0.17	0.14	0.12	0.18	0.11	0.16
0.18	0.18	0.15	0.15	0.15	0.13	0.12	0.10	0.09	0.13	0.08	0.12
0.44	0.42	0.28	0.30	0.28	0.21	0.21	0.16	0.13	0.21	0.12	0.19
0.34	0.32	0.24	0.25	0.23	0.19	0.18	0.14	0.12	0.19	0.11	0.17
0.40	0.38	0.26	0.28	0.26	0.20	0.20	0.15	0.13	0.20	0.11	0.18
0.31	0.29	0.23	0.23	0.22	0.18	0.17	0.14	0.12	0.18	0.11	0.16
0.17	0.16	0.14	0.14	0.14	0.12	0.12	0.10	0.09	0.12	0.08	0.11
0.29	0.28	0.21	0.22	0.21	0.17	0.17	0.13	0.12	0.17	0.10	0.16
0.14	0.14	0.12	0.12	0.12	0.10	0.10	0.09	0.08	0.10	0.07	0.10
0.37	0.35	0.25	0.26	0.25	0.19	0.19	0.15	0.13	0.19	0.11	0.17
0.28	0.27	0.21	0.21	0.21	0.17	0.16	0.13	0.12	0.17	0.10	0.15
0.23	0.22	0.18	0.18	0.18	0.15	0.14	0.12	0.11	0.15	0.095	0.14
0.37	0.35	0.25	0.26	0.25	0.20	0.19	0.15	0.13	0.20	0.11	0.18
0.36	0.34	0.24	0.25	0.24	0.19	0.19	0.15	0.13	0.19	0.11	0.17
0.35	0.33	0.24	0.25	0.24	0.19	0.18	0.14	0.12	0.19	0.11	0.17
0.28	0.26	0.20	0.21	0.20	0.17	0.16	0.13	0.11	0.17	0.10	0.15
0.61	0.56	0.34	0.36	0.34	0.25	0.24	0.18	0.15	0.25	0.13	0.22
0.51	0.47	0.31	0.32	0.31	0.23	0.22	0.17	0.14	0.23	0.12	0.20
0.41	0.38	0.26	0.28	0.26	0.20	0.20	0.15	0.13	0.21	0.11	0.18

^aCalculations include cement mortar (1/2 in.) between veneer or facing and backing.

^bBased on one air cell in direction of heat flow.

^cA waterproof membrane should be provided between the outer material and the insulation fill to prevent possible wetting by absorption and a subsequent lowering of efficiency.