

TABLE 10. COEFFICIENTS OF TRANSMISSION (*U*) OF MASONRY PARTITIONS^a

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.

EXAMPLE		EXAMPLE OF SUBSTITUTION	
Resistances used are given below in this table or in Table 3 or 4.		Resistances used are given below in this table or in Table 3 or 4.	
Construction	Resistance (<i>R</i>)	Replace item 3 with gypsum tile (4 in.)	Total resistance 5.25
1. Inside surface (still air)	0.68	Deduct	3. Cement block (cinder agg.) (4 in.) 1.11
2. Plas. (lt. wt. agg.) ½ in.	0.39	Deduct	Difference 1.14
3. Cement block (cinder agg.) (4 in.)	1.11	Add	3. Gypsum tile (4 in.) 1.67
4. Plas. (lt. wt. agg.) ½ in.	0.39	Total resistance 5.51	
5. Inside surface (still air)	0.68	$U = 1/R = 1/5.51 = 0.18$	
Total resistance 5.25			
$U = 1/R = 1/5.25 = 0.19$			
See value 0.31 in bold face type in table below			

TYPE OF PARTITION		SURFACE FINISH					
		NONE	PLAS. (LT. WT. AGG.) ½ IN.		PLAS. (SAND AGG.) ½ IN.		
			One side 0.39	Two sides 0.78	One side 0.11	Two sides 0.22	
MATERIAL	<i>R</i>	<i>U</i>	<i>U</i>	<i>U</i>	<i>U</i>	<i>U</i>	
Hollow concrete block							
(Cinder agg.)							
(3 in.)	0.80	0.45	0.38	0.33	0.43	0.41	
(4 in.)	1.11	0.40	0.35	0.31	0.39	0.37	
(8 in.)	1.73	0.32	0.29	0.26	0.31	0.30	
(12 in.)	1.89	0.31	0.27	0.25	0.30	0.29	
(Lt. wt. agg.)							
(3 in.)	1.27	0.38	0.33	0.30	0.36	0.35	
(4 in.)	1.60	0.35	0.31	0.27	0.34	0.32	
(8 in.)	2.00	0.30	0.27	0.24	0.29	0.28	
(12 in.)	2.27	0.28	0.25	0.23	0.27	0.26	
(Gravel agg.)							
(8 in.)	1.11	0.40	0.35	0.31	0.39	0.37	
(12 in.)	1.28	0.38	0.33	0.29	0.36	0.35	
Hollow clay tile							
(3 in.)	0.80	0.45	0.39	0.34	0.44	0.42	
(4 in.)	1.11	0.40	0.35	0.31	0.39	0.37	
(6 in.)	1.52	0.35	0.31	0.27	0.33	0.32	
(8 in.)	1.85	0.31	0.28	0.25	0.30	0.29	
Hollow gypsum tile							
(3 in.)	1.35	0.37	0.32	0.29	0.35	0.34	
(4 in.)	1.67	0.33	0.29	0.26	0.32	0.31	
½ in. Solid plaster walls							
Gypsum lath (½ in.) and plas.							
¾ in. each side							
(Lt. wt. agg.)	1.39	0.36	—	—	—	—	
(Sand agg.)	0.71	0.48	—	—	—	—	
1 in. each side							
(Lt. wt. agg.)	1.73	0.32	—	—	—	—	
(Sand agg.)	0.81	0.46	—	—	—	—	
Metal lath and plas. ^b							
2 in. total thickness							
(Lt. wt. agg.)	1.28	0.38	—	—	—	—	
(Sand agg.)	0.36	0.58	—	—	—	—	
2½ in. total thickness							
(Lt. wt. agg.)	1.60	0.34	—	—	—	—	
(Sand agg.)	0.45	0.55	—	—	—	—	
Glass and glass blocks							

See Table 20

^a See text section Calculating Overall Coefficients for basis of calculations.^b Metal core and supports disregarded. Plaster troweled smooth both sides.TABLE 11. COEFFICIENTS OF TRANSMISSION (*U*) OF FRAME CONSTRUCTION CEILINGS AND FLOORS^a

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

EXAMPLE		EXAMPLE OF SUBSTITUTION	
Resistances used are given below in this table or in Tables 3 or 4.		Resistances used are given below in this table or in Tables 3 or 4.	
Heated room above unheated space		Assume heated room is below unheated space so heat flow is up.	
Construction	Resistance (<i>R</i>)	Construction	Resistance (<i>R</i>)
(Heat flow down)		(Heat flow up)	
1. Top surface (still air)	0.92	1. Top surface (heat flow down)	0.92
2. Linoleum or tile (av. <i>R</i>)	0.05	2. Air space (heat flow down)	1.52
3. Felt	0.06	3. Bottom surface (heat flow down)	0.92
4. Plywood (¾ in.)	0.73	Resistance deducted	3.09
5. Wood subfloor (¾ in.)	0.98	Deduct	Difference 2.84
6. Air space (7½ in.)	1.25	Add	
7. Metal lath and ¾ in. plas.	0.47	1. Top surface (heat flow up)	0.61
(lt. wt. agg.)	0.92	3. Air space (heat flow up)	0.85
8. Bottom surface (still air)	0.92	Bottom surface (heat flow up)	0.61
Total resistance	5.43	Resistance added	0.07
$U = 1/R = 1/5.43 = 0.18$		Total resistance	4.41
See value 0.18 in bold face type in table below.		$U = 1/R = 1/4.41 = 0.23$	

TO ADJUST *U* VALUES FOR CONSTRUCTION WITH ADDED INSULATION BETWEEN FRAMING MEMBERS, SEE TABLE 16.

DIRECTION OF HEAT		HEAT FLOW UPWARD (WINTER CONDITIONS)						HEAT FLOW DOWNWARD (SUMMER CONDITIONS)					
		TYPE OF FLOOR											
		WOOD SUBFLOOR ($\frac{3}{8}$ in.), FELT, AND-						WOOD SUBFLOOR ($\frac{3}{8}$ in.) FELT, AND-					
		WOOD SUBFLOOR ($\frac{3}{8}$ in.) FELT, AND-						WOOD SUBFLOOR ($\frac{3}{8}$ in.) FELT, AND-					
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^a See text section Calculating Overall Coefficients for basis of calculations.^b To adjust *U* values see note just above this table.^c Includes asphalt, rubber, and plastic tile (¾ in.), ceramic tile, or terrazo (1 in.).^d Includes thermal resistance of ¾ in. gypsum wall board.