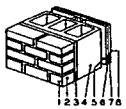
Table 7 .... Coefficients of Transmission (*U*) of Masonry Walls[a]

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 an outside wind velocity of 15 mph



Example—Wall G 1			*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 (*R*)		Replace items 6 and 7 with wood panels (¾ in.) and vapor barrier applied over furring strips		*3.85*
1. Outside surface (15 mph wind)	*0.17*		Total resistance		
2. Face brick (4 in.) (av. *R*.)	*0.39*		Deduct 6. Gypsum lath (⅜ in.)	*0.32*	
3. Cement mortar (½ in)	*0.10*		7. Plas. (sand agg.) (½ in)	*0.09*	*0.41*
4. Concrete block (cinder agg.) (4 in.)	*1.11*		Difference		*3.44*
5. Air space[b]	*0.97*		Add 6. Vapor barrier	*0.06*	
6. Gypsum lath (⅜ in.)	*0.32*		7. Wood panel (¾ in.)	*0.94*	*1.00*
7. Plas. (sand agg.) (½ in)	*0.09*		Total resistance		*4.44*
8. Inside surface (still air)	*0.68*		$U = 1/R = 1/4.44 =$		0.23
Total resistance	*3.85*				
$U = 1/R = 1/3.85 =$	0.26				

See value 0.26 in boldface type in table below.

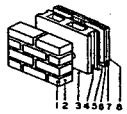
To Adjust U Values for Construction with Added Insulation between Furring Strips, See Table 16

Exterior Facing			*Backing*		*Interior Finish*												
					None	Plas. ⅝ in. on Wall		Metal Lath and ¾ in. Plas. on Furring		Gypsum Lath (⅜ in.) and ½ in. Plas. on Furring			Insul. Bd. Lath (½ in.) and ½ in. Plas. on Furring			Wood Lath ½ in. Plas.	Number
						(Sand agg.)	(Lt. wt. agg.)	(Sand agg.)	(Lt. wt. agg.)	No plas.	(Sand agg.)	(Lt. wt. agg.)	No plas.	(Sand agg.)	(Lt. wt. agg.)	(Sand agg.)	
			Resistance →		*0.11*	*0.39*	*0.33*	*0.47*	*0.32*	*0.41*	*0.64*	*1.43*	*1.52*	*0.40*		
Material	*R*	Av. *R*	Material	*R*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	
					A	B	C	D	E	F	G	H	I	J	K		
			Concrete block (Cinder agg.)														
			(4 in.)	*1.11*	0.41	0.39	0.35	0.28	0.26	0.27	0.26	0.25	0.21	0.20	0.26	1
			(8 in.)	*1.72*	0.33	0.32	0.29	0.24	0.22	0.23	0.23	0.21	0.18	0.18	0.23	2
			(12 in.)	*1.89*	0.31	0.30	0.28	0.23	0.21	0.22	0.22	0.21	0.18	0.17	0.22	3
			(Lt. wt. agg.)														
			(4 in.)	*1.60*	0.35	0.34	0.31	0.25	0.23	0.24	0.24	0.22	0.19	0.19	0.24	4
			(8 in.)	*2.00*	0.30	0.29	0.27	0.23	0.21	0.22	0.21	0.20	0.17	0.17	0.21	5
Face brick			(12 in.)	*2.27*	0.28	0.27	0.25	0.21	0.20	0.20	0.20	0.19	0.17	0.16	0.20	6
4 in.	*0.44*		(Sand agg.)														
Stone			(4 in.)	*0.71*	0.49	0.46	0.41	0.32	0.29	0.30	0.29	0.27	0.22	0.22	0.29	7
4 in.	*0.32*		(8 in.)	*1.11*	0.41	0.39	0.35	0.28	0.26	0.27	0.26	0.25	0.21	0.20	0.26	8
Precast concrete (sand agg.)		*0.59*	(12 in.)	*1.28*	0.38	0.37	0.33	0.27	0.25	0.26	0.25	0.24	0.20	0.20	0.25	9
4 in.	*0.32*																
6 in.	*0.48*		Hollow clay tile														
			(4 in.)	*1.11*	0.41	0.39	0.35	0.28	0.26	0.27	0.26	0.25	0.21	0.20	0.26	10
			(8 in.)	*1.85*	0.31	0.30	0.28	0.23	0.22	0.22	0.22	0.21	0.18	0.18	0.22	11
			(12 in.)	*2.50*	0.26	0.25	0.24	0.20	0.19	0.19	0.19	0.18	0.16	0.16	0.19	12
			Concrete (Sand agg.)														
			(4 in.)	*0.32*	0.60	0.56	0.49	0.36	0.32	0.34	0.33	0.31	0.25	0.24	0.33	13
			(6 in.)	*0.48*	0.55	0.52	0.45	0.34	0.31	0.32	0.31	0.29	0.24	0.23	0.31	14
			(8 in.)	*0.64*	0.51	0.48	0.42	0.32	0.29	0.31	0.30	0.28	0.23	0.22	0.30	15
			Concrete block (Cinder agg.)														
			(4 in.)	*1.11*	0.36	0.35	0.32	0.26	0.24	0.25	0.24	0.23	0.19	0.19	0.24	16
			(8 in.)	*1.72*	0.29	0.29	0.26	0.22	0.21	0.21	0.21	0.20	0.17	0.17	0.21	17
			(12 in.)	*1.89*	0.28	0.27	0.25	0.21	0.20	0.21	0.20	0.19	0.17	0.17	0.20	18
			(Lt. wt. agg.)														
			(4 in.)	*1.60*	0.32	0.30	0.28	0.23	0.22	0.22	0.22	0.21	0.18	0.18	0.22	19
			(8 in.)	*2.00*	0.27	0.26	0.25	0.21	0.20	0.20	0.20	0.19	0.16	0.16	0.20	20
			(12 in.)	*2.27*	0.25	0.25	0.23	0.20	0.19	0.19	0.19	0.18	0.16	0.16	0.19	21
Common brick			(Sand agg.)														
4 in.	*0.80*		(4 in.)	*0.71*	0.42	0.40	0.36	0.29	0.26	0.27	0.27	0.25	0.21	0.21	0.27	22
Precast concrete (sand agg.)		*0.72*	(8 in.)	*1.11*	0.36	0.35	0.32	0.26	0.24	0.25	0.24	0.23	0.19	0.19	0.24	23
8 in.	*0.64*		(12 in.)	*1.28*	0.34	0.33	0.30	0.25	0.23	0.24	0.23	0.22	0.19	0.18	0.23	24
			Hollow clay tile														
			(4 in.)	*1.11*	0.36	0.35	0.32	0.26	0.24	0.25	0.24	0.23	0.19	0.19	0.24	25
			(8 in.)	*1.85*	0.28	0.28	0.26	0.22	0.20	0.21	0.20	0.19	0.17	0.17	0.20	26
			(12 in.)	*2.50*	0.24	0.23	0.22	0.19	0.18	0.18	0.18	0.17	0.15	0.15	0.18	27
			Concrete (Sand agg.)														
			(4 in.)	*0.32*	0.50	0.48	0.42	0.32	0.29	0.30	0.30	0.28	0.23	0.22	0.30	28
			(6 in.)	*0.48*	0.47	0.44	0.39	0.31	0.28	0.29	0.28	0.27	0.22	0.22	0.28	29
			(8 in.)	*0.64*	0.43	0.41	0.37	0.29	0.27	0.28	0.27	0.26	0.21	0.21	0.27	30

[a] See text section Calculating Overall Coefficients for basis of calculations.
[b] To adjust *U* values for the effect of added insulation between framing members, see Table 16.

Table 8 .... Coefficients of Transmission (*U*) of Masonry Cavity Walls[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 an outside wind velocity of 15 mph



Example—Wall H 6		*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 (*R*)	Replace item 4 with 8 in. concrete block and items 6 and 7 with ⅝ in. plas. (sand agg.) applied directly to concrete block.	
1. Outside surface (15 mph wind)	*0.17*	Total resistance	*4.90*
2. Common brick (4 in.) (av. *R*.)	*0.76*	Deduct 4. Concrete block (gravel agg.)	
3. Air space[b]	*0.97*	4 in.	*0.71*
4. Concrete block (gravel agg.) (4 in.)	*0.71*	5. Air space	*0.97*
5. Air space[b]	*0.97*	6. Gypsum lath (⅜ in.)	*0.32*
6. Gypsum lath (⅜ in.)	*0.32*	7. Plas. (lt. wt. agg.) (½ in.)	*0.32*
7. Plas. (lt. wt. agg.) (½ in.)	*0.32*	Difference	*2.58*
8. Inside surface (still air)	*0.68*	Add 4. Concrete block (gravel agg.) 8 in.	*1.11*
Total resistance	*4.90*	7. Plas. (sand agg.) (⅝ in.)	*0.11*
$U = 1/R = 1/4.90 =$	0.20	Total resistance =	*3.80*
		$U = 1/R = 1/3.80$	0.26

See value 0.20 in boldface type in table below.

To Adjust U Values for Construction with Added Insulation[a] between Inner and Outer Tiers or between Furring Strips, See Table 16

Exterior Construction			*Inner Section*		*Interior Finish*											
					None	Plas. ⅝ in. on Wall		Metal Lath and ¾ in. Plas. on Furring		Gypsum Lath (⅜ in.) and ½ in. Plas. on Furring			Insul. Bd. Lath and ½ in. Plas. on Furring			Wood Lath and ½ in. Plas.	Number
						(Sand agg.)	(Lt. wt. agg.)	(Sand agg.)	(Lt. wt. agg.)	No plas.	(Sand agg.)	(Lt. wt. agg.)	No plas.	(Sand agg.)	(Lt. wt. agg.)	(Sand agg.)	
			Resistance →		*0.11*	*0.39*		*0.13*	*0.47*	*0.32*	*0.41*	*0.64*	*1.43*	*1.52*	*0.40*	
Material	*R*	Av. *R*	Material	*R*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	*U*	
					A	B	C	D	E	F	G	H	I	J	K	
			Concrete block (4 in.)													
			(Gravel agg.)	*0.71*	0.34	0.32	0.30	0.25	0.23	0.23	0.23	0.22	0.19	0.18	0.23	1
			(Cinder agg.)	*1.11*	0.30	0.29	0.27	0.22	0.21	0.21	0.21	0.20	0.17	0.17	0.21	2
Face brick (4 in.)	*0.44*		(Lt. wt. agg.)	*1.60*	0.27	0.26	0.24	0.21	0.19	0.20	0.19	0.19	0.16	0.16	0.19	3
			Common brick (4 in.)	*0.80*	0.33	0.32	0.29	0.24	0.22	0.23	0.23	0.21	0.18	0.18	0.23	4
			Clay tile (4 in.)	*1.11*	0.30	0.29	0.27	0.22	0.21	0.21	0.21	0.20	0.17	0.17	0.21	5
			Concrete block (4 in.)													
			(Gravel agg.)	*0.71*	0.30	0.29	0.27	0.23	0.21	0.22	0.21	0.20	0.18	0.17	0.21	6
Common brick (4 in.)	*0.80*		(Cinder agg.)	*1.11*	0.27	0.26	0.25	0.21	0.19	0.20	0.20	0.19	0.16	0.16	0.20	7
Concrete block (gravel agg.) (4 in.)	*0.71*	*0.76*	(Lt. wt. agg.)	*1.60*	0.25	0.24	0.22	0.19	0.18	0.19	0.18	0.18	0.15	0.15	0.18	8
			Common brick (4 in.)	*0.80*	0.30	0.29	0.27	0.22	0.21	0.21	0.21	0.20	0.17	0.17	0.21	9
			Clay tile (4 in.)	*1.11*	0.27	0.26	0.25	0.21	0.19	0.20	0.20	0.19	0.16	0.16	0.20	10
			Concrete block (4 in.)													
			(Gravel agg.)	*0.71*	0.27	0.27	0.25	0.21	0.20	0.20	0.20	0.19	0.17	0.16	0.20	11
Concrete block (cinder agg.) (4 in.)	*1.11*		(Cinder agg.)	*1.11*	0.25	0.24	0.23	0.19	0.18	0.19	0.18	0.18	0.16	0.15	0.18	12
			(Lt. wt. agg.)	*1.60*	0.23	0.22	0.21	0.18	0.17	0.17	0.17	0.17	0.15	0.14	0.17	13
			Common brick (4 in.)	*0.80*	0.27	0.26	0.24	0.21	0.19	0.20	0.20	0.19	0.16	0.16	0.20	14
			Clay tile (4 in.)	*1.11*	0.25	0.24	0.23	0.19	0.18	0.19	0.18	0.18	0.16	0.15	0.18	15

[a] See text section Calculating Overall Coefficients for basis of calculations.
[b] To adjust *U* values for the effect of added insulation between framing members, see Table 16.
[c] If insulation is to be used in the cavity it should be a water resistant type.