

TABLE 8. CONDUCTIVITIES (k) AND CONDUCTANCES (C) OF BUILDING MATERIALS
Tests Conducted by Various Authorities.^a Insulation Tests Based on Samples
Submitted by Manufacturers

MATERIAL	DESCRIPTION	MEAN TEMP. (DEG. FAHR.)	CONDUCT- ^a TIVITY (k) OR CONDUCT- TANCE (C)	AUTHORITY
Concrete.....	Stone 1-2-5 mix.....	95 ^c	6.27	C. L. Norton, Boston, Mass.
Concrete.....	Cinder 1-2-4 mix.....	122	2.35	C. L. Norton, Boston, Mass.
Slate.....	Limestone or Sandstone.....	201	10.37	Lees & Chorlton
Stone.....			10.0	Estimated ^d
1½ in. Split Furring Clay Tile	1½		1.40 ^b	Estimated ^m
2 in. Split Furring Clay Tile	2		1.25 ^b	Estimated ^m
2 in. Furring Clay Tile	2		1.18 ^b	Estimated ^m
3 in. Furring or Partition Clay Tile	3		1.00 ^b	Estimated ^m
4 in. Partition Clay Tile	4		0.93 ^b	Estimated ^m
6 in. Partition Clay Tile	6		0.86 ^b	Estimated ^m
6 in. Load Bearing Clay Tile	6		0.54 ^b	Estimated ^m
8 in. Backup Clay Tile	8		0.50 ^b	Estimated ^m
8 in. Backup Clay Tile	8		0.39 ^b	Estimated ^m
8 in. Load Bearing Clay Tile	8		0.49 ^b	Estimated ^m

^aIn addition to the conductivity values for the authorities listed, considerable work of importance pertaining to the heat transmission of various types of construction and materials has been done by the late Prof. John R. Allen and Prof. A. J. Wood of the Engineering Experiment Station of Pennsylvania State College.

^bFor thickness stated or used in construction, not per 1 in. thickness.

^cHot side of plate.

^dAverage of several values.

^mEstimated from air space conductance data in Table 3, and Burned Clay conductivity of 5.0 per 1 in. Walls of load bearing tile assumed ¾ in. thick and webbs assumed ½ in. thick. Walls of all other tile assumed ½ in. thick and webbs ½ in. thick.

ⁿSee Chapter LX, by Chas. H. Herter of the Report of the Insulation Committee, A. S. R. E., Annual Meeting 1922, Revised to 1924, entitled, Heat Transmission of Insulating Materials for a more comprehensive collection of heat transmission data relating to building and insulating materials.

TABLE 8. CONDUCTIVITIES (k) AND CONDUCTANCES (C) OF BUILDING MATERIALS
(Continued)
Tests Conducted by Various Authorities.^a Insulation Tests Based on Samples
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MATERIAL	DESCRIPTION	MEAN TEMP. (DEG. FAHR.)	CONDUCT- ^a TIVITY (k) OR CONDUCT- TANCE (C)	AUTHORITY
10 in. Load Bearing Clay Tile	10		0.46 ^b	Estimated ^m
12 in. Load Bearing Clay Tile	12		0.33 ^b	Estimated ^m
8 in. Concrete Blocks (hollow)	8		0.84 ^b	Estimated ⁿ
12 in. Concrete Blocks (hollow)	12		0.52 ^b	Estimated ⁿ
8 in. Cinder Blocks (hollow)	8		0.45 ^b	Estimated ⁿ
12 in. Cinder Blocks (hollow)	12		0.28 ^b	Estimated ⁿ
3 in. Gypsum Tile (hollow)	3		0.55 ^b	Estimated ^o
4 in. Gypsum Tile (hollow)	4		0.46 ^b	Estimated ^o
Ten Test.....	Rigid insulation made from wood fiber	52	0.33	E. A. Allcut University of Toronto

^mEstimated from air space conductance data in Table 3, and Burned Clay conductivity of 5.0 per 1 in. Walls of load bearing tile assumed ¾ in. thick and webbs assumed ½ in. thick. Walls of all other tile assumed ½ in. thick and webbs ½ in. thick.

ⁿEstimated from air space conductance data in Table 3, and conductivity of concrete of 8.30 per 1 in. Shells and webbs assumed 2 in. thick. Conductivity of dry Cinder Concrete assumed 3.33.

^oEstimated from air space conductance data in Table 3, and conductivity of gypsum tile of 1.66 per 1 in. It is assumed that each tile has 4 cores per 12 in. width, each 1½ in. in diameter.

^qEstimated from air space conductance data in Table 3, and conductivity of gypsum tile of 1.66 per 1 in. It is assumed that each tile has 3 cores per 12 in. width, each 2½ in. in diameter.