

TABLE 10-B. COEFFICIENTS OF TRANSMISSION (U) OF VARIOUS TYPES OF FLAT ROOFS COVERED WITH BUILT-UP ROOFING

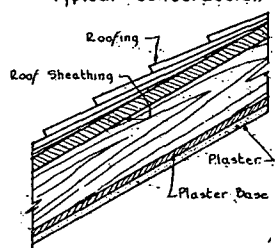
Note.—These coefficients are expressed in B.t.u. per hour per square foot per 1 deg. Fahr. difference in temperature between the air on the two sides and are based on an outside wind exposure of 15 miles per hour.

| FLAT ROOFS - METAL LATH AND PLASTER CEILINGS.†                                                                                                 |                         |                                     |                |       |       |       |                 |       |       |       |                                           |       |                   |       |       |  |
|------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------|-------------------------------------|----------------|-------|-------|-------|-----------------|-------|-------|-------|-------------------------------------------|-------|-------------------|-------|-------|--|
| The values of U in this Table are based on the following Internal Conductivities (C) which are expressed in B.t.u. per Hr. per Sq.Ft. per 1" F |                         |                                     | Concrete Roofs |       |       |       | Wood Roofs      |       |       |       | Boured Gypsum Containing Wood Fiber (15%) |       | Flat Metal Roof/s |       |       |  |
|                                                                                                                                                |                         |                                     | Thickness - X  |       |       |       | Thickness - X † |       |       |       | Thickness - X                             |       |                   |       |       |  |
|                                                                                                                                                |                         |                                     | 1½"            | 2"    | 3"    | 4"    | 5"              | 6"    | 1"    | 1½"   | 2"                                        | 3"    | 4"                |       |       |  |
|                                                                                                                                                |                         |                                     | a              | b     | c     | d     | e               | f     | g     | h     | i                                         | j     | k                 |       |       |  |
| Roof No.                                                                                                                                       | Thickness of Insulation | Kind of Insulation                  |                |       |       |       |                 |       |       |       |                                           |       |                   |       |       |  |
| 227                                                                                                                                            | 0"                      | No Insulation                       | 0.304          | 0.300 | 0.290 | 0.280 | 0.271           | 0.262 | 0.258 | 0.227 | 0.131                                     | 0.175 | 0.149             | 0.221 | 0.202 |  |
| 228                                                                                                                                            | ½"                      | Fiber Insulation                    | 0.208          | 0.215 | 0.201 | 0.196 | 0.192           | 0.188 | 0.185 | 0.169 | 0.160                                     | 0.138 | 0.121             | 0.165 | 0.154 |  |
| 229                                                                                                                                            | 1"                      | (board form)                        | 0.158          | 0.157 | 0.154 | 0.145 | 0.149           | 0.146 | 0.145 | 0.133 | 0.129                                     | 0.114 | 0.102             | 0.132 | 0.125 |  |
| 230                                                                                                                                            | 1½"                     |                                     | 0.128          | 0.127 | 0.125 | 0.123 | 0.121           | 0.119 | 0.118 | 0.112 | 0.108                                     | 0.097 | 0.089             | 0.110 | 0.105 |  |
| 231                                                                                                                                            | 2"                      |                                     | 0.107          | 0.106 | 0.105 | 0.104 | 0.102           | 0.101 | 0.101 | 0.096 | 0.093                                     | 0.085 | 0.078             | 0.095 | 0.091 |  |
| 232                                                                                                                                            | 1"                      | Cork board                          | 0.151          | 0.150 | 0.147 | 0.145 | 0.142           | 0.140 | 0.138 | 0.129 | 0.124                                     | 0.110 | 0.100             | 0.127 | 0.120 |  |
| 233                                                                                                                                            | 1½"                     |                                     | 0.121          | 0.120 | 0.118 | 0.116 | 0.115           | 0.113 | 0.112 | 0.106 | 0.103                                     | 0.093 | 0.085             | 0.105 | 0.104 |  |
| 234                                                                                                                                            | 2"                      |                                     | 0.100          | 0.100 | 0.099 | 0.098 | 0.096           | 0.095 | 0.095 | 0.090 | 0.088                                     | 0.081 | 0.075             | 0.089 | 0.086 |  |
| 235                                                                                                                                            | ½"                      | Soft Felt or Quilt (Not Compressed) | 0.194          | 0.192 | 0.188 | 0.184 | 0.180           | 0.176 | 0.174 | 0.160 | 0.152                                     | 0.132 | 0.116             | 0.157 | 0.147 |  |
| 236                                                                                                                                            | 1"                      |                                     | 0.143          | 0.142 | 0.139 | 0.137 | 0.135           | 0.133 | 0.132 | 0.123 | 0.118                                     | 0.106 | 0.096             | 0.121 | 0.115 |  |
| 237                                                                                                                                            | 2"                      | Cellular Gypsum                     | 0.170          | 0.168 | 0.165 | 0.162 | 0.159           | 0.156 | 0.154 | 0.143 | 0.136                                     | 0.120 | 0.107             |       |       |  |

\*Pre cast cement.  
†Nominal thickness specified—actual thicknesses used in computations.  
‡The figures in this table may be used with sufficient accuracy for wood lath and plaster ceilings.

TABLE 11-A. COEFFICIENTS OF TRANSMISSION (U) OF VARIOUS TYPES OF PITCHED ROOFS

Note.—These coefficients are expressed in B.t.u. per hour per square foot per 1 deg. Fahr. difference in temperature between the air on the two sides and are based on an outside wind exposure of 15 miles per hour.

| HEATED ATTICS                                                                                                                                   |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|----------------------------------------|-------------------------------------------------------------------------------------|-----------------------------------------------------------|--------------------------------------------|--------------------------------------------------|
| The values of U in this Table are based on the following Internal Conductivities (C) which are expressed in B.t.u. per Hr. per Sq. Ft. per 1" F |                                                     |                                        | Typical Construction                                                                |                                                           |                                            |                                                  |
| Asphalt or Composition Roofing 6.50 per 1"                                                                                                      |                                                     |                                        |  |                                                           |                                            |                                                  |
| Asbestos Shingles 6.00 per 1"                                                                                                                   |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Slate Shingles 10.37 per 1"                                                                                                                     |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Wood (Yellow Pine or Fir) 1.00 per 1"                                                                                                           |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Wood Lath & Plaster 2.00 as applied.                                                                                                            |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Plaster Board 3.04 per 1"                                                                                                                       |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Plaster (Gypsum) 2.32 per 1"                                                                                                                    |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Fiber Insulation (Board form) 0.33 per 1"                                                                                                       |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Felt or Quilt Insulation (Soft) 0.27 per 1"                                                                                                     |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Cork board 0.30 per 1"                                                                                                                          |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Cellular Gypsum (18") 0.59 per 1"                                                                                                               |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Powdered Gypsum (26") 0.52 per 1"                                                                                                               |                                                     |                                        |                                                                                     |                                                           |                                            |                                                  |
| Roof Number                                                                                                                                     | Type of Ceiling                                     | Insulation between Roof Rafters        | Type of Roofing & Roof Sheathing                                                    |                                                           |                                            |                                                  |
|                                                                                                                                                 |                                                     |                                        | Wood Shingles or Wood Strips*                                                       | Asphalt Shingles or Composition Roofing on Wood Sheathing | Liquid Asbestos Shingles on Wood Sheathing | Slate or Tile and Roofing Felt on Wood Sheathing |
|                                                                                                                                                 |                                                     |                                        | a                                                                                   | b                                                         | c                                          | d                                                |
| 238                                                                                                                                             | No Ceiling (Rafters exposed)                        | None                                   | 0.483                                                                               | 0.518                                                     | 0.515                                      | 0.549                                            |
| 239                                                                                                                                             | Wood Lath & Plaster (1/2")                          | None                                   | 0.246                                                                               | 0.259                                                     | 0.259                                      | 0.262                                            |
| 240                                                                                                                                             | Wood Lath & Plaster (1/2")                          | 1/2" Felt or Quilt Insulation (Soft) † | 0.136                                                                               | 0.139                                                     | 0.139                                      | 0.141                                            |
| 241                                                                                                                                             | Wood Lath & Plaster (1/2")                          | 1" Felt or Quilt Insulation (Soft) †   | 0.109                                                                               | 0.111                                                     | 0.111                                      | 0.112                                            |
| 242                                                                                                                                             | Wood Lath & Plaster (1/2")                          | 1/2" Fiber Insulation † (Board form)   | 0.141                                                                               | 0.144                                                     | 0.144                                      | 0.146                                            |
| 243                                                                                                                                             | Wood Lath & Plaster (1/2")                          | 1" Fiber Insulation † (Board form)     | 0.116                                                                               | 0.118                                                     | 0.118                                      | 0.119                                            |
| 244                                                                                                                                             | Wood Lath & Plaster (1/2")                          | Cellular Gypsum Fill †                 | 0.108                                                                               | 0.116                                                     | 0.116                                      | 0.118                                            |
| 245                                                                                                                                             | Wood Lath & Plaster (1/2")                          | Powdered Gypsum Fill †                 | 0.099                                                                               | 0.109                                                     | 0.109                                      | 0.110                                            |
| 246                                                                                                                                             | Plaster Board & Plaster (1/2")                      | None                                   | 0.256                                                                               | 0.266                                                     | 0.265                                      | 0.274                                            |
| 247                                                                                                                                             | 1 1/2" Cork board & Plaster (1/2")                  | None                                   | 0.114                                                                               | 0.115                                                     | 0.115                                      | 0.117                                            |
| 248                                                                                                                                             | 2" Cork board & Plaster (1/2")                      | None                                   | 0.096                                                                               | 0.097                                                     | 0.097                                      | 0.098                                            |
| 249                                                                                                                                             | 1/2" Fiber Insulation (Board form) & Plaster (1/2") | 1/2" Fiber Insulation † (Board form)   | 0.120                                                                               | 0.122                                                     | 0.122                                      | 0.124                                            |
| 250                                                                                                                                             | 1/2" Fiber Insulation (Board form) & Plaster (1/2") | None                                   | 0.189                                                                               | 0.194                                                     | 0.193                                      | 0.198                                            |

\*Based on 1 in. by 4 in., spaced 2 in.

†Can also be applied to underside of roof rafters with furring strips between.

‡Assumed 3 3/4 in. thick, based on 2 in. by 4 in. rafters.