

TABLE 6. THERMODYNAMIC PROPERTIES OF MOIST AIR, 29.921 IN. HG (CONTINUED)

| TEMP<br>DEG<br>F | SATURATION<br>HUMIDITY RATIO<br>W <sub>s</sub> WEIGHT OF WATER<br>PER LB OF DRY AIR |        | VOLUME<br>CU FT PER LB DRY AIR |                                                       | ENTHALPY<br>BTU PER LB DRY AIR         |                           | SPECIFIC<br>ENTHALPY<br>OF<br>LIQUID<br>WATER<br>BTU PER<br>LB<br>h <sub>f</sub> | SATURATION PRESSURE<br>p <sub>s</sub>  |           | TEMP<br>DEG<br>F |
|------------------|-------------------------------------------------------------------------------------|--------|--------------------------------|-------------------------------------------------------|----------------------------------------|---------------------------|----------------------------------------------------------------------------------|----------------------------------------|-----------|------------------|
|                  |                                                                                     |        |                                |                                                       |                                        |                           |                                                                                  |                                        |           |                  |
|                  | Pounds                                                                              | Grains | Dry Air<br>v <sub>a</sub>      | v <sub>as</sub><br>(v <sub>a</sub> - v <sub>s</sub> ) | Saturated<br>Mixture<br>v <sub>g</sub> | Dry Air<br>h <sub>a</sub> | h <sub>as</sub><br>(h <sub>a</sub> - h <sub>s</sub> )                            | Saturated<br>Mixture<br>h <sub>g</sub> | In. of Hg | Lb per<br>Sq In. |
| 70               | 0.01574                                                                             | 110.2  | 13.34                          | 0.34                                                  | 13.08                                  | 16.79                     | 17.17                                                                            | 33.96                                  | 0.78968   | 0.8628           |
| 71               | 0.01631                                                                             | 114.2  | 13.37                          | 0.34                                                  | 13.11                                  | 17.03                     | 17.30                                                                            | 34.00                                  | 0.79451   | 0.8724           |
| 72               | 0.01688                                                                             | 118.2  | 13.40                          | 0.35                                                  | 13.15                                  | 17.17                     | 17.45                                                                            | 34.05                                  | 0.80000   | 0.8824           |
| 73               | 0.01745                                                                             | 122.2  | 13.43                          | 0.35                                                  | 13.18                                  | 17.31                     | 17.60                                                                            | 34.10                                  | 0.80555   | 0.8924           |
| 74               | 0.01803                                                                             | 126.6  | 13.44                          | 0.35                                                  | 13.20                                  | 17.45                     | 17.75                                                                            | 34.15                                  | 0.81110   | 0.9024           |
| 75               | 0.01873                                                                             | 131.1  | 13.47                          | 0.40                                                  | 13.87                                  | 17.99                     | 20.47                                                                            | 38.46                                  | 0.87448   | 0.9295           |
| 76               | 0.01938                                                                             | 135.7  | 13.49                          | 0.42                                                  | 13.91                                  | 18.23                     | 21.19                                                                            | 39.42                                  | 0.90398   | 0.9440           |
| 77               | 0.02005                                                                             | 140.4  | 13.52                          | 0.43                                                  | 13.95                                  | 18.47                     | 21.93                                                                            | 40.40                                  | 0.93452   | 0.9590           |
| 78               | 0.02075                                                                             | 145.3  | 13.54                          | 0.45                                                  | 13.99                                  | 18.71                     | 22.71                                                                            | 41.42                                  | 0.96588   | 0.9744           |
| 79               | 0.02147                                                                             | 150.3  | 13.57                          | 0.46                                                  | 14.03                                  | 18.95                     | 23.51                                                                            | 42.46                                  | 0.99825   | 0.9903           |
| 80               | 0.02221                                                                             | 155.5  | 13.59                          | 0.49                                                  | 14.08                                  | 19.19                     | 24.32                                                                            | 43.51                                  | 1.0316    | 0.5087           |
| 81               | 0.02298                                                                             | 160.9  | 13.62                          | 0.50                                                  | 14.12                                  | 19.43                     | 25.18                                                                            | 44.61                                  | 1.0661    | 0.5236           |
| 82               | 0.02377                                                                             | 166.4  | 13.64                          | 0.52                                                  | 14.16                                  | 19.67                     | 26.05                                                                            | 45.72                                  | 1.1013    | 0.5409           |
| 83               | 0.02459                                                                             | 172.1  | 13.67                          | 0.54                                                  | 14.21                                  | 19.91                     | 26.97                                                                            | 46.88                                  | 1.1377    | 0.5588           |
| 84               | 0.02543                                                                             | 178.0  | 13.69                          | 0.57                                                  | 14.26                                  | 20.15                     | 27.90                                                                            | 48.05                                  | 1.1752    | 0.5772           |
| 85               | 0.02629                                                                             | 184.0  | 13.72                          | 0.58                                                  | 14.30                                  | 20.39                     | 28.85                                                                            | 49.24                                  | 1.2135    | 0.5960           |
| 86               | 0.02718                                                                             | 190.2  | 13.74                          | 0.59                                                  | 14.34                                  | 20.63                     | 29.84                                                                            | 50.47                                  | 1.2527    | 0.6153           |
| 87               | 0.02804                                                                             | 196.7  | 13.77                          | 0.62                                                  | 14.39                                  | 20.87                     | 30.87                                                                            | 51.74                                  | 1.2923    | 0.6352           |
| 88               | 0.02894                                                                             | 203.3  | 13.79                          | 0.65                                                  | 14.44                                  | 21.11                     | 31.91                                                                            | 53.02                                  | 1.3346    | 0.6555           |
| 89               | 0.03002                                                                             | 210.1  | 13.82                          | 0.66                                                  | 14.48                                  | 21.35                     | 33.00                                                                            | 54.35                                  | 1.3774    | 0.6765           |
| 90               | 0.03102                                                                             | 217.1  | 13.84                          | 0.69                                                  | 14.53                                  | 21.59                     | 34.11                                                                            | 55.70                                  | 1.4211    | 0.6980           |
| 91               | 0.03205                                                                             | 224.4  | 13.87                          | 0.71                                                  | 14.58                                  | 21.83                     | 35.26                                                                            | 57.09                                  | 1.4661    | 0.7201           |
| 92               | 0.03312                                                                             | 231.8  | 13.89                          | 0.74                                                  | 14.63                                  | 22.07                     | 36.45                                                                            | 58.52                                  | 1.5125    | 0.7429           |
| 93               | 0.03421                                                                             | 239.5  | 13.92                          | 0.77                                                  | 14.69                                  | 22.32                     | 37.67                                                                            | 59.99                                  | 1.5600    | 0.7662           |
| 94               | 0.03535                                                                             | 247.5  | 13.94                          | 0.79                                                  | 14.73                                  | 22.56                     | 38.94                                                                            | 61.50                                  | 1.6088    | 0.7902           |
| 95               | 0.03652                                                                             | 255.6  | 13.97                          | 0.82                                                  | 14.79                                  | 22.80                     | 40.25                                                                            | 63.05                                  | 1.6591    | 0.8149           |
| 96               | 0.03772                                                                             | 264.0  | 13.99                          | 0.85                                                  | 14.84                                  | 23.04                     | 41.58                                                                            | 64.62                                  | 1.7108    | 0.8403           |
| 97               | 0.03896                                                                             | 272.7  | 14.02                          | 0.88                                                  | 14.90                                  | 23.28                     | 42.97                                                                            | 66.25                                  | 1.7638    | 0.8663           |
| 98               | 0.04024                                                                             | 281.7  | 14.04                          | 0.91                                                  | 14.95                                  | 23.52                     | 44.40                                                                            | 67.92                                  | 1.8181    | 0.8930           |
| 99               | 0.04156                                                                             | 290.9  | 14.07                          | 0.94                                                  | 15.01                                  | 23.76                     | 45.87                                                                            | 69.63                                  | 1.8741    | 0.9206           |
| 100              | 0.04293                                                                             | 300.5  | 14.10                          | 0.97                                                  | 15.07                                  | 24.00                     | 47.00                                                                            | 71.40                                  | 1.9316    | 0.9487           |
| 101              | 0.04433                                                                             | 310.3  | 14.12                          | 1.00                                                  | 15.12                                  | 24.24                     | 48.37                                                                            | 73.21                                  | 1.9904    | 0.9776           |
| 102              | 0.04577                                                                             | 320.4  | 14.15                          | 1.03                                                  | 15.18                                  | 24.48                     | 50.58                                                                            | 75.06                                  | 2.0507    | 1.0072           |
| 103              | 0.04725                                                                             | 330.8  | 14.17                          | 1.08                                                  | 15.25                                  | 24.72                     | 52.25                                                                            | 76.97                                  | 2.1128    | 1.0377           |
| 104              | 0.04879                                                                             | 341.5  | 14.20                          | 1.11                                                  | 15.31                                  | 24.96                     | 53.96                                                                            | 78.92                                  | 2.1763    | 1.0689           |

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| TEMP<br>DEG<br>F | SATURATION<br>HUMIDITY RATIO<br>W <sub>s</sub> WEIGHT OF WATER<br>PER LB OF DRY AIR |        | VOLUME<br>CU FT PER LB DRY AIR |                                                       | ENTHALPY<br>BTU PER LB DRY AIR         |                           | SPECIFIC<br>ENTHALPY<br>OF<br>LIQUID<br>WATER<br>BTU PER<br>LB<br>h <sub>f</sub> | SATURATION PRESSURE<br>p <sub>s</sub>  |           | TEMP<br>DEG<br>F |
|------------------|-------------------------------------------------------------------------------------|--------|--------------------------------|-------------------------------------------------------|----------------------------------------|---------------------------|----------------------------------------------------------------------------------|----------------------------------------|-----------|------------------|
|                  |                                                                                     |        |                                |                                                       |                                        |                           |                                                                                  |                                        |           |                  |
|                  | Pounds                                                                              | Grains | Dry Air<br>v <sub>a</sub>      | v <sub>as</sub><br>(v <sub>a</sub> - v <sub>s</sub> ) | Saturated<br>Mixture<br>v <sub>g</sub> | Dry Air<br>h <sub>a</sub> | h <sub>as</sub><br>(h <sub>a</sub> - h <sub>s</sub> )                            | Saturated<br>Mixture<br>h <sub>g</sub> | In. of Hg | Lb per<br>Sq In. |
| 105              | 0.05037                                                                             | 352.6  | 14.22                          | 1.15                                                  | 15.37                                  | 25.20                     | 55.73                                                                            | 80.93                                  | 2.2414    | 1.1009           |
| 106              | 0.05200                                                                             | 364.0  | 14.25                          | 1.19                                                  | 15.44                                  | 25.44                     | 57.56                                                                            | 83.00                                  | 2.3084    | 1.1338           |
| 107              | 0.05368                                                                             | 375.8  | 14.27                          | 1.23                                                  | 15.50                                  | 25.68                     | 59.45                                                                            | 85.13                                  | 2.3770    | 1.1675           |
| 108              | 0.05541                                                                             | 387.9  | 14.30                          | 1.27                                                  | 15.57                                  | 25.92                     | 61.38                                                                            | 87.30                                  | 2.4473    | 1.2020           |
| 109              | 0.05719                                                                             | 400.3  | 14.32                          | 1.32                                                  | 15.64                                  | 26.16                     | 63.38                                                                            | 89.54                                  | 2.5196    | 1.2375           |
| 110              | 0.05904                                                                             | 413.3  | 14.35                          | 1.36                                                  | 15.71                                  | 26.40                     | 65.46                                                                            | 91.86                                  | 2.5939    | 1.274            |
| 111              | 0.06092                                                                             | 426.4  | 14.37                          | 1.41                                                  | 15.78                                  | 26.64                     | 67.67                                                                            | 94.21                                  | 2.6692    | 1.311            |
| 112              | 0.06282                                                                             | 440.4  | 14.39                          | 1.46                                                  | 15.85                                  | 26.88                     | 69.92                                                                            | 96.70                                  | 2.7466    | 1.350            |
| 113              | 0.06483                                                                             | 454.5  | 14.42                          | 1.51                                                  | 15.93                                  | 27.12                     | 72.05                                                                            | 99.20                                  | 2.8260    | 1.389            |
| 114              | 0.06700                                                                             | 469.0  | 14.45                          | 1.55                                                  | 16.00                                  | 27.36                     | 74.30                                                                            | 101.76                                 | 2.9094    | 1.429            |
| 115              | 0.06913                                                                             | 483.9  | 14.47                          | 1.61                                                  | 16.08                                  | 27.60                     | 76.80                                                                            | 104.40                                 | 2.9929    | 1.470            |
| 116              | 0.07134                                                                             | 499.4  | 14.50                          | 1.66                                                  | 16.16                                  | 27.84                     | 79.39                                                                            | 107.13                                 | 3.0764    | 1.512            |
| 117              | 0.07361                                                                             | 515.3  | 14.52                          | 1.72                                                  | 16.24                                  | 28.08                     | 81.84                                                                            | 109.92                                 | 3.1600    | 1.555            |
| 118              | 0.07600                                                                             | 532.0  | 14.55                          | 1.77                                                  | 16.32                                  | 28.32                     | 84.53                                                                            | 112.85                                 | 3.2576    | 1.600            |
| 119              | 0.07840                                                                             | 548.8  | 14.57                          | 1.84                                                  | 16.41                                  | 28.56                     | 87.24                                                                            | 115.80                                 | 3.3492    | 1.645            |
| 120              | 0.08093                                                                             | 566.5  | 14.60                          | 1.90                                                  | 16.50                                  | 28.80                     | 90.09                                                                            | 118.89                                 | 3.4449    | 1.692            |
| 121              | 0.08348                                                                             | 584.4  | 14.62                          | 1.96                                                  | 16.58                                  | 29.04                     | 92.97                                                                            | 122.01                                 | 3.5406    | 1.739            |
| 122              | 0.08602                                                                             | 602.1  | 14.65                          | 2.03                                                  | 16.68                                  | 29.28                     | 95.99                                                                            | 125.27                                 | 3.6404    | 1.788            |
| 123              | 0.08862                                                                             | 620.1  | 14.67                          | 2.10                                                  | 16.77                                  | 29.52                     | 99.11                                                                            | 128.63                                 | 3.7422    | 1.838            |
| 124              | 0.09175                                                                             | 642.3  | 14.70                          | 2.17                                                  | 16.87                                  | 29.76                     | 102.30                                                                           | 132.06                                 | 3.8460    | 1.889            |
| 125              | 0.09466                                                                             | 662.6  | 14.72                          | 2.24                                                  | 16.98                                  | 30.00                     | 105.59                                                                           | 135.59                                 | 3.9519    | 1.941            |
| 126              | 0.09770                                                                             | 683.9  | 14.75                          | 2.31                                                  | 17.08                                  | 30.24                     | 108.99                                                                           | 139.26                                 | 4.0618    | 1.995            |
| 127              | 0.1008                                                                              | 705.6  | 14.77                          | 2.40                                                  | 17.17                                  | 30.48                     | 112.53                                                                           | 143.07                                 | 4.1718    | 2.049            |
| 128              | 0.1040                                                                              | 728.0  | 14.80                          | 2.47                                                  | 17.27                                  | 30.72                     | 116.15                                                                           | 146.87                                 | 4.2858    | 2.105            |
| 129              | 0.1074                                                                              | 751.8  | 14.83                          | 2.55                                                  | 17.38                                  | 30.96                     | 120.00                                                                           | 150.90                                 | 4.4059    | 2.163            |
| 130              | 0.1107                                                                              | 774.9  | 14.85                          | 2.64                                                  | 17.49                                  | 31.20                     | 123.73                                                                           | 154.93                                 | 4.5220    | 2.221            |
| 131              | 0.1143                                                                              | 800.1  | 14.88                          | 2.73                                                  | 17.61                                  | 31.45                     | 128.81                                                                           | 159.26                                 | 4.6441    | 2.281            |
| 132              | 0.1180                                                                              | 826.0  | 14.90                          | 2.83                                                  | 17.73                                  | 31.69                     | 133.99                                                                           | 163.68                                 | 4.7703    | 2.343            |
| 133              | 0.1218                                                                              | 852.6  | 14.93                          | 2.92                                                  | 17.85                                  | 31.93                     | 139.31                                                                           | 168.24                                 | 4.8986    | 2.406            |
| 134              | 0.1257                                                                              | 879.9  | 14.95                          | 3.02                                                  | 17.97                                  | 32.17                     | 144.72                                                                           | 172.89                                 | 5.0289    | 2.470            |
| 135              | 0.1297                                                                              | 907.9  | 14.98                          | 3.12                                                  | 18.10                                  | 32.41                     | 150.26                                                                           | 177.67                                 | 5.1633    | 2.536            |
| 136              | 0.1339                                                                              | 937.3  | 15.01                          | 3.23                                                  | 18.23                                  | 32.65                     | 156.02                                                                           | 182.67                                 | 5.2997    | 2.603            |
| 137              | 0.1382                                                                              | 967.4  | 15.03                          | 3.33                                                  | 18.36                                  | 32.89                     | 161.91                                                                           | 187.80                                 | 5.4402    | 2.672            |
| 138              | 0.1427                                                                              | 998.9  | 15.05                          | 3.43                                                  | 18.50                                  | 33.13                     | 167.91                                                                           | 193.14                                 | 5.5827    | 2.742            |
| 139              | 0.1473                                                                              | 1031.1 | 15.08                          | 3.57                                                  | 18.65                                  | 33.37                     | 163.24                                                                           | 198.61                                 | 5.7293    | 2.814            |

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