

## 120.00 ATMOSPHERE ISOBAR

| TEMP.<br>K | DENSITY<br>MOL/LITER | ENTHALPY<br>J/MOL | INTERNAL<br>ENERGY<br>J/MOL | ENTROPY<br>J/MOL-K | TEMP.<br>K | DENSITY<br>MOL/LITER | ENTHALPY<br>J/MOL | INTERNAL<br>ENERGY<br>J/MOL | ENTROPY<br>J/MOL-K |
|------------|----------------------|-------------------|-----------------------------|--------------------|------------|----------------------|-------------------|-----------------------------|--------------------|
|            |                      |                   |                             |                    | 91         | 35.2223              | 3356.6            | 3011.3                      | 55.06              |
|            |                      |                   |                             |                    | 92         | 35.0817              | 3400.9            | 3054.3                      | 55.54              |
|            |                      |                   |                             |                    | 93         | 34.9401              | 3445.5            | 3097.5                      | 56.02              |
|            |                      |                   |                             |                    | 94         | 34.7977              | 3490.1            | 3140.7                      | 56.50              |
|            |                      |                   |                             |                    | 95         | 34.6544              | 3534.9            | 3184.0                      | 56.97              |
|            |                      |                   |                             |                    | 96         | 34.5103              | 3579.8            | 3227.4                      | 57.44              |
|            |                      |                   |                             |                    | 97         | 34.3655              | 3624.7            | 3270.9                      | 57.91              |
|            |                      |                   |                             |                    | 98         | 34.2198              | 3669.8            | 3314.5                      | 58.37              |
|            |                      |                   |                             |                    | 99         | 34.0734              | 3714.9            | 3358.1                      | 58.83              |
|            |                      |                   |                             |                    | 100        | 33.9262              | 3760.1            | 3401.7                      | 59.28              |
|            |                      |                   |                             |                    | 101        | 33.7782              | 3805.4            | 3445.4                      | 59.74              |
|            |                      |                   |                             |                    | 102        | 33.6295              | 3850.7            | 3489.1                      | 60.18              |
|            |                      |                   |                             |                    | 103        | 33.4800              | 3896.0            | 3532.9                      | 60.62              |
|            |                      |                   |                             |                    | 104        | 33.3298              | 3941.4            | 3576.6                      | 61.06              |
|            |                      |                   |                             |                    | 105        | 33.1788              | 3986.8            | 3620.3                      | 61.50              |
|            |                      |                   |                             |                    | 106        | 33.0270              | 4032.2            | 3664.0                      | 61.93              |
|            |                      |                   |                             |                    | 107        | 32.8744              | 4077.6            | 3707.7                      | 62.35              |
|            |                      |                   |                             |                    | 108        | 32.7210              | 4123.0            | 3751.4                      | 62.78              |
|            |                      |                   |                             |                    | 109        | 32.5667              | 4168.4            | 3795.0                      | 63.19              |
|            |                      |                   |                             |                    | 110        | 32.4116              | 4213.8            | 3838.6                      | 63.61              |
|            |                      |                   |                             |                    | 111        | 32.2556              | 4259.2            | 3882.2                      | 64.02              |
|            |                      |                   |                             |                    | 112        | 32.0988              | 4304.5            | 3925.7                      | 64.43              |
|            |                      |                   |                             |                    | 113        | 31.9410              | 4349.9            | 3969.2                      | 64.83              |
|            |                      |                   |                             |                    | 114        | 31.7822              | 4395.2            | 4012.6                      | 65.23              |
|            |                      |                   |                             |                    | 115        | 31.6225              | 4440.5            | 4056.0                      | 65.62              |
|            |                      |                   |                             |                    | 116        | 31.4618              | 4485.9            | 4099.4                      | 66.02              |
|            |                      |                   |                             |                    | 117        | 31.3000              | 4531.2            | 4142.7                      | 66.41              |
|            |                      |                   |                             |                    | 118        | 31.1372              | 4576.5            | 4186.0                      | 66.79              |
|            |                      |                   |                             |                    | 119        | 30.9732              | 4621.8            | 4229.2                      | 67.17              |
|            |                      |                   |                             |                    | 120        | 30.8080              | 4667.2            | 4272.5                      | 67.55              |
|            |                      |                   |                             |                    | 121        | 30.6417              | 4712.5            | 4315.7                      | 67.93              |
|            |                      |                   |                             |                    | 122        | 30.4741              | 4758.0            | 4359.0                      | 68.30              |
|            |                      |                   |                             |                    | 123        | 30.3052              | 4803.5            | 4402.2                      | 68.68              |
|            |                      |                   |                             |                    | 124        | 30.1350              | 4849.0            | 4445.5                      | 69.04              |
|            |                      |                   |                             |                    | 125        | 29.9634              | 4894.7            | 4488.9                      | 69.41              |
|            |                      |                   |                             |                    | 126        | 29.7903              | 4940.5            | 4532.3                      | 69.78              |
|            |                      |                   |                             |                    | 127        | 29.6157              | 4986.4            | 4575.8                      | 70.14              |
|            |                      |                   |                             |                    | 128        | 29.4395              | 5032.5            | 4619.5                      | 70.50              |
|            |                      |                   |                             |                    | 129        | 29.2617              | 5078.8            | 4663.2                      | 70.86              |
|            |                      |                   |                             |                    | 130        | 29.0822              | 5125.3            | 4707.2                      | 71.22              |
|            |                      |                   |                             |                    | 131        | 28.9009              | 5172.1            | 4751.4                      | 71.58              |
|            |                      |                   |                             |                    | 132        | 28.7178              | 5219.3            | 4795.9                      | 71.94              |
|            |                      |                   |                             |                    | 133        | 28.5328              | 5266.8            | 4840.6                      | 72.30              |
|            |                      |                   |                             |                    | 134        | 28.3457              | 5314.7            | 4885.7                      | 72.65              |
|            |                      |                   |                             |                    | 135        | 28.1565              | 5363.0            | 4931.2                      | 73.01              |
|            |                      |                   |                             |                    | 136        | 27.9652              | 5411.5            | 4976.7                      | 73.37              |
|            |                      |                   |                             |                    | 137        | 27.7715              | 5460.2            | 5022.3                      | 73.73              |
|            |                      |                   |                             |                    | 138        | 27.5755              | 5509.1            | 5068.1                      | 74.08              |
|            |                      |                   |                             |                    | 139        | 27.3770              | 5558.3            | 5114.1                      | 74.44              |
|            |                      |                   |                             |                    | 140        | 27.1758              | 5607.7            | 5160.2                      | 74.79              |
|            |                      |                   |                             |                    | 141        | 26.9720              | 5657.3            | 5206.4                      | 75.15              |
|            |                      |                   |                             |                    | 142        | 26.7653              | 5707.2            | 5252.9                      | 75.50              |
|            |                      |                   |                             |                    | 143        | 26.5556              | 5757.5            | 5299.6                      | 75.85              |
|            |                      |                   |                             |                    | 144        | 26.3427              | 5808.3            | 5346.7                      | 76.21              |
|            |                      |                   |                             |                    | 145        | 26.1266              | 5859.6            | 5394.2                      | 76.57              |
|            |                      |                   |                             |                    | 146        | 25.9071              | 5911.5            | 5442.2                      | 76.92              |
|            |                      |                   |                             |                    | 147        | 25.6840              | 5964.1            | 5490.6                      | 77.28              |
|            |                      |                   |                             |                    | 148        | 25.4571              | 6017.3            | 5539.6                      | 77.65              |
|            |                      |                   |                             |                    | 149        | 25.2263              | 6071.0            | 5589.0                      | 78.01              |
|            |                      |                   |                             |                    | 150        | 24.9914              | 6125.5            | 5639.0                      | 78.38              |
|            |                      |                   |                             |                    | 151        | 24.7521              | 6181.0            | 5689.8                      | 78.75              |
|            |                      |                   |                             |                    | 152        | 24.5084              | 6237.8            | 5741.7                      | 79.12              |
|            |                      |                   |                             |                    | 153        | 24.2599              | 6295.3            | 5794.1                      | 79.50              |
|            |                      |                   |                             |                    | 154        | 24.0064              | 6353.6            | 5847.1                      | 79.88              |
|            |                      |                   |                             |                    | 155        | 23.7479              | 6412.8            | 5900.8                      | 80.26              |
|            |                      |                   |                             |                    | 156        | 23.4839              | 6472.9            | 5955.2                      | 80.65              |
|            |                      |                   |                             |                    | 157        | 23.2143              | 6534.0            | 6010.2                      | 81.04              |
|            |                      |                   |                             |                    | 158        | 22.9389              | 6596.0            | 6065.9                      | 81.44              |
|            |                      |                   |                             |                    | 159        | 22.6575              | 6659.1            | 6122.4                      | 81.83              |
|            |                      |                   |                             |                    | 160        | 22.3699              | 6723.2            | 6179.7                      | 82.24              |
| *          | 86.782               | 35.8048           | 3171.2                      | 2831.6             | 52.97      |                      |                   |                             |                    |
|            | 87                   | 35.7751           | 3180.7                      | 2840.8             | 53.08      |                      |                   |                             |                    |
|            | 88                   | 35.6385           | 3224.4                      | 2883.2             | 53.58      |                      |                   |                             |                    |
|            | 89                   | 35.5008           | 3268.3                      | 2925.8             | 54.08      |                      |                   |                             |                    |
|            | 90                   | 35.3621           | 3312.3                      | 2968.5             | 54.57      |                      |                   |                             |                    |

\* PHASE CHANGE



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| TEMP.<br>K | DENSITY<br>MOL/LITER | ENTHALPY<br>J/MOL | INTERNAL<br>ENERGY<br>J/MOL | ENTROPY<br>J/MOL-K | TEMP.<br>K | DENSITY<br>MOL/LITER | ENTHALPY<br>J/MOL | INTERNAL<br>ENERGY<br>J/MOL | ENTROPY<br>J/MOL-K |
|------------|----------------------|-------------------|-----------------------------|--------------------|------------|----------------------|-------------------|-----------------------------|--------------------|
| 161        | 22.0759              | 6788.5            | 6237.7                      | 82.64              | 231        | 7.72113              | 10954.9           | 9380.1                      | 104.63             |
| 162        | 21.7755              | 6854.9            | 6296.5                      | 83.05              | 232        | 7.65716              | 10992.0           | 9404.1                      | 104.79             |
| 163        | 21.4685              | 6922.4            | 6356.0                      | 83.47              | 233        | 7.59458              | 11028.9           | 9427.8                      | 104.95             |
| 164        | 21.1549              | 6991.2            | 6416.4                      | 83.89              | 234        | 7.53335              | 11065.3           | 9451.3                      | 105.11             |
| 165        | 20.8347              | 7061.2            | 6477.6                      | 84.31              | 235        | 7.47343              | 11101.5           | 9474.5                      | 105.26             |
| 166        | 20.5082              | 7132.4            | 6539.5                      | 84.75              | 236        | 7.41476              | 11137.5           | 9497.6                      | 105.41             |
| 167        | 20.1756              | 7204.9            | 6602.2                      | 85.18              | 237        | 7.35729              | 11173.1           | 9520.4                      | 105.56             |
| 168        | 19.8372              | 7278.6            | 6665.6                      | 85.62              | 238        | 7.30100              | 11208.5           | 9543.0                      | 105.71             |
| 169        | 19.4936              | 7353.4            | 6729.6                      | 86.06              | 239        | 7.24584              | 11243.6           | 9565.5                      | 105.86             |
| 170        | 19.1455              | 7429.2            | 6794.1                      | 86.51              | 240        | 7.19177              | 11278.4           | 9587.7                      | 106.01             |
| 171        | 18.7936              | 7506.1            | 6859.1                      | 86.96              | 241        | 7.13875              | 11313.0           | 9609.7                      | 106.15             |
| 172        | 18.4390              | 7583.9            | 6924.5                      | 87.42              | 242        | 7.08676              | 11347.4           | 9631.6                      | 106.29             |
| 173        | 18.0827              | 7662.4            | 6990.0                      | 87.87              | 243        | 7.03575              | 11381.5           | 9653.3                      | 106.43             |
| 174        | 17.7260              | 7741.5            | 7055.6                      | 88.33              | 244        | 6.98570              | 11415.4           | 9674.8                      | 106.57             |
| 175        | 17.3702              | 7821.1            | 7121.0                      | 88.78              | 245        | 6.93658              | 11449.1           | 9696.2                      | 106.71             |
| 176        | 17.0165              | 7900.8            | 7186.3                      | 89.24              | 246        | 6.88836              | 11482.6           | 9717.4                      | 106.85             |
| 177        | 16.6662              | 7980.6            | 7251.0                      | 89.69              | 247        | 6.84100              | 11515.8           | 9738.4                      | 106.98             |
| 178        | 16.3206              | 8060.3            | 7315.3                      | 90.14              | 248        | 6.79449              | 11548.9           | 9759.3                      | 107.11             |
| 179        | 15.9809              | 8139.6            | 7378.8                      | 90.58              | 249        | 6.74880              | 11581.8           | 9780.1                      | 107.25             |
| 180        | 15.6479              | 8218.5            | 7441.4                      | 91.02              | 250        | 6.70390              | 11614.4           | 9800.7                      | 107.38             |
| 181        | 15.3227              | 8296.7            | 7503.1                      | 91.46              | 251        | 6.65978              | 11646.9           | 9821.1                      | 107.51             |
| 182        | 15.0059              | 8374.0            | 7563.7                      | 91.88              | 252        | 6.61640              | 11679.2           | 9841.4                      | 107.64             |
| 183        | 14.6981              | 8450.5            | 7623.2                      | 92.30              | 253        | 6.57375              | 11711.3           | 9861.6                      | 107.76             |
| 184        | 14.3997              | 8525.9            | 7681.5                      | 92.71              | 254        | 6.53181              | 11743.3           | 9881.7                      | 107.89             |
| 185        | 14.1109              | 8600.2            | 7738.5                      | 93.11              | 255        | 6.49056              | 11775.0           | 9901.6                      | 108.01             |
| 186        | 13.8319              | 8673.4            | 7794.3                      | 93.51              | 256        | 6.44997              | 11806.6           | 9921.5                      | 108.14             |
| 187        | 13.5627              | 8745.3            | 7848.8                      | 93.89              | 257        | 6.41003              | 11838.1           | 9941.2                      | 108.26             |
| 188        | 13.3033              | 8816.0            | 7902.0                      | 94.27              | 258        | 6.37073              | 11869.4           | 9960.8                      | 108.38             |
| 189        | 13.0536              | 8885.4            | 7953.9                      | 94.64              | 259        | 6.33204              | 11900.5           | 9980.2                      | 108.50             |
| 190        | 12.8132              | 8953.5            | 8004.5                      | 95.00              | 260        | 6.29395              | 11931.5           | 9999.6                      | 108.62             |
| 191        | 12.5820              | 9020.3            | 8053.9                      | 95.35              | 261        | 6.25644              | 11962.4           | 10018.9                     | 108.74             |
| 192        | 12.3597              | 9085.8            | 8102.0                      | 95.69              | 262        | 6.21950              | 11993.1           | 10038.0                     | 108.86             |
| 193        | 12.1459              | 9150.1            | 8149.0                      | 96.03              | 263        | 6.18312              | 12023.6           | 10057.1                     | 108.97             |
| 194        | 11.9404              | 9213.1            | 8194.8                      | 96.35              | 264        | 6.14727              | 12054.0           | 10076.0                     | 109.09             |
| 195        | 11.7428              | 9275.0            | 8239.5                      | 96.67              | 265        | 6.11195              | 12084.3           | 10094.9                     | 109.20             |
| 196        | 11.5527              | 9335.6            | 8283.1                      | 96.98              | 266        | 6.07715              | 12114.5           | 10113.6                     | 109.32             |
| 197        | 11.3699              | 9395.1            | 8325.7                      | 97.28              | 267        | 6.04284              | 12144.5           | 10132.3                     | 109.43             |
| 198        | 11.1940              | 9453.5            | 8367.3                      | 97.58              | 268        | 6.00903              | 12174.4           | 10150.9                     | 109.54             |
| 199        | 11.0246              | 9510.8            | 8407.9                      | 97.87              | 269        | 5.97569              | 12204.2           | 10169.4                     | 109.65             |
| 200        | 10.8615              | 9567.1            | 8447.6                      | 98.15              | 270        | 5.94281              | 12233.9           | 10187.8                     | 109.76             |
| 201        | 10.7043              | 9622.3            | 8486.4                      | 98.42              | 271        | 5.91039              | 12263.4           | 10206.1                     | 109.87             |
| 202        | 10.5529              | 9676.6            | 8524.3                      | 98.69              | 272        | 5.87841              | 12292.8           | 10224.4                     | 109.98             |
| 203        | 10.4067              | 9729.9            | 8561.5                      | 98.96              | 273        | 5.84687              | 12322.2           | 10242.5                     | 110.09             |
| 204        | 10.2657              | 9782.3            | 8597.9                      | 99.21              | 274        | 5.81575              | 12351.4           | 10260.6                     | 110.19             |
| 205        | 10.1296              | 9833.9            | 8633.5                      | 99.47              | 275        | 5.78504              | 12380.5           | 10278.5                     | 110.30             |
| 206        | 9.99811              | 9884.6            | 8668.5                      | 99.71              | 276        | 5.75474              | 12409.5           | 10296.5                     | 110.41             |
| 207        | 9.87097              | 9934.5            | 8702.7                      | 99.96              | 277        | 5.72483              | 12438.4           | 10314.4                     | 110.51             |
| 208        | 9.74802              | 9983.7            | 8736.3                      | 100.19             | 278        | 5.69531              | 12467.1           | 10332.2                     | 110.61             |
| 209        | 9.62904              | 10032.1           | 8769.3                      | 100.42             | 279        | 5.66617              | 12495.8           | 10349.9                     | 110.72             |
| 210        | 9.51384              | 10079.8           | 8801.7                      | 100.65             | 280        | 5.63739              | 12524.4           | 10367.5                     | 110.82             |
| 211        | 9.40224              | 10126.7           | 8833.5                      | 100.88             | 281        | 5.60898              | 12552.9           | 10385.1                     | 110.92             |
| 212        | 9.29406              | 10173.1           | 8864.8                      | 101.09             | 282        | 5.58093              | 12581.3           | 10402.6                     | 111.02             |
| 213        | 9.18916              | 10218.8           | 8895.5                      | 101.31             | 283        | 5.55322              | 12609.7           | 10420.1                     | 111.12             |
| 214        | 9.08737              | 10263.8           | 8925.8                      | 101.52             | 284        | 5.52585              | 12637.9           | 10437.4                     | 111.22             |
| 215        | 8.98856              | 10308.3           | 8955.6                      | 101.73             | 285        | 5.49881              | 12666.0           | 10454.8                     | 111.32             |
| 216        | 8.89258              | 10352.2           | 8984.9                      | 101.93             | 286        | 5.47210              | 12694.1           | 10472.0                     | 111.42             |
| 217        | 8.79931              | 10395.6           | 9013.7                      | 102.13             | 287        | 5.44571              | 12722.0           | 10489.2                     | 111.52             |
| 218        | 8.70862              | 10438.4           | 9042.2                      | 102.33             | 288        | 5.41963              | 12749.9           | 10506.3                     | 111.61             |
| 219        | 8.62042              | 10480.8           | 9070.2                      | 102.52             | 289        | 5.39385              | 12777.7           | 10523.4                     | 111.71             |
| 220        | 8.53458              | 10522.6           | 9097.9                      | 102.71             | 290        | 5.36838              | 12805.4           | 10540.5                     | 111.81             |
| 221        | 8.45100              | 10564.0           | 9125.2                      | 102.90             | 291        | 5.34320              | 12833.1           | 10557.4                     | 111.90             |
| 222        | 8.36960              | 10604.9           | 9152.1                      | 103.09             | 292        | 5.31831              | 12860.7           | 10574.3                     | 112.00             |
| 223        | 8.29027              | 10645.3           | 9178.6                      | 103.27             | 293        | 5.29370              | 12888.1           | 10591.2                     | 112.09             |
| 224        | 8.21294              | 10685.4           | 9204.9                      | 103.45             | 294        | 5.26937              | 12915.6           | 10608.0                     | 112.18             |
| 225        | 8.13752              | 10725.0           | 9230.8                      | 103.62             | 295        | 5.24531              | 12942.9           | 10624.8                     | 112.28             |
| 226        | 8.06393              | 10764.3           | 9256.4                      | 103.80             | 296        | 5.22152              | 12970.2           | 10641.5                     | 112.37             |
| 227        | 7.99211              | 10803.1           | 9281.7                      | 103.97             | 297        | 5.19799              | 12997.4           | 10658.1                     | 112.46             |
| 228        | 7.92198              | 10841.6           | 9306.7                      | 104.14             | 298        | 5.17472              | 13024.5           | 10674.7                     | 112.55             |
| 229        | 7.85349              | 10879.7           | 9331.4                      | 104.30             | 299        | 5.15170              | 13051.6           | 10691.3                     | 112.64             |
| 230        | 7.78655              | 10917.5           | 9355.9                      | 104.47             | 300        | 5.12893              | 13078.5           | 10707.8                     | 112.73             |