

| Temperatur [°C] | Druck [bar] | | Dichte [kg/m³] | | Enthalpie [kJ/kg] | | Entropie [J/kg*K] | |
|--------------------|----------------|-----------|-------------------|-----------|----------------------|-----------|----------------------|-----------|
| | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig |
| -65,0 | 0,465 | 0,444 | 1291,8 | 1,672 | 101,96 | 426,07 | 0,5936 | 2,1544 |
| -64,0 | 0,493 | 0,471 | 1289,1 | 1,766 | 103,41 | 426,64 | 0,6005 | 2,1497 |
| -63,0 | 0,522 | 0,499 | 1286,4 | 1,864 | 104,86 | 427,22 | 0,6074 | 2,1450 |
| -62,0 | 0,553 | 0,528 | 1283,7 | 1,967 | 106,30 | 427,79 | 0,6143 | 2,1404 |
| -61,0 | 0,585 | 0,559 | 1280,9 | 2,074 | 107,75 | 428,36 | 0,6211 | 2,1359 |
| -60,0 | 0,619 | 0,591 | 1278,1 | 2,186 | 109,20 | 428,92 | 0,6279 | 2,1315 |
| -59,0 | 0,654 | 0,625 | 1275,4 | 2,303 | 110,65 | 429,49 | 0,6347 | 2,1271 |
| -58,0 | 0,690 | 0,660 | 1272,6 | 2,424 | 112,10 | 430,05 | 0,6414 | 2,1228 |
| -57,0 | 0,729 | 0,697 | 1269,8 | 2,551 | 113,56 | 430,61 | 0,6481 | 2,1185 |
| -56,0 | 0,769 | 0,735 | 1267,0 | 2,683 | 115,01 | 431,17 | 0,6548 | 2,1143 |
| -55,0 | 0,811 | 0,776 | 1264,2 | 2,820 | 116,46 | 431,72 | 0,6615 | 2,1101 |
| -54,0 | 0,854 | 0,817 | 1261,4 | 2,962 | 117,92 | 432,27 | 0,6682 | 2,1060 |
| -53,0 | 0,900 | 0,861 | 1258,6 | 3,110 | 119,38 | 432,82 | 0,6748 | 2,1020 |
| -52,0 | 0,947 | 0,907 | 1255,8 | 3,264 | 120,84 | 433,37 | 0,6814 | 2,0980 |
| -51,0 | 0,996 | 0,954 | 1253,0 | 3,424 | 122,30 | 433,91 | 0,6879 | 2,0940 |
| -50,0 | 1,048 | 1,003 | 1250,1 | 3,590 | 123,76 | 434,45 | 0,6945 | 2,0901 |
| -49,0 | 1,101 | 1,055 | 1247,3 | 3,763 | 125,22 | 434,99 | 0,7010 | 2,0863 |
| -48,0 | 1,157 | 1,108 | 1244,4 | 3,942 | 126,69 | 435,53 | 0,7075 | 2,0825 |
| -47,0 | 1,214 | 1,164 | 1241,5 | 4,127 | 128,15 | 436,06 | 0,7140 | 2,0788 |
| -46,0 | 1,274 | 1,221 | 1238,7 | 4,319 | 129,62 | 436,59 | 0,7205 | 2,0751 |
| -45,0 | 1,337 | 1,281 | 1235,8 | 4,519 | 131,09 | 437,12 | 0,7269 | 2,0714 |
| -44,0 | 1,401 | 1,343 | 1232,9 | 4,725 | 132,57 | 437,64 | 0,7333 | 2,0678 |
| -43,0 | 1,469 | 1,408 | 1229,9 | 4,939 | 134,04 | 438,16 | 0,7397 | 2,0643 |
| -42,0 | 1,538 | 1,475 | 1227,0 | 5,161 | 135,52 | 438,68 | 0,7461 | 2,0608 |
| -41,0 | 1,610 | 1,544 | 1224,1 | 5,390 | 136,99 | 439,19 | 0,7524 | 2,0573 |
| -40,0 | 1,685 | 1,617 | 1221,1 | 5,627 | 138,47 | 439,70 | 0,7588 | 2,0539 |
| -39,0 | 1,763 | 1,691 | 1218,2 | 5,873 | 139,95 | 440,21 | 0,7651 | 2,0505 |
| -38,0 | 1,843 | 1,768 | 1215,2 | 6,126 | 141,44 | 440,71 | 0,7714 | 2,0471 |
| -37,0 | 1,926 | 1,849 | 1212,2 | 6,389 | 142,93 | 441,21 | 0,7776 | 2,0438 |
| -36,0 | 2,012 | 1,931 | 1209,3 | 6,660 | 144,41 | 441,71 | 0,7839 | 2,0406 |
| -35,0 | 2,101 | 2,017 | 1206,3 | 6,940 | 145,90 | 442,20 | 0,7902 | 2,0373 |
| -34,0 | 2,193 | 2,106 | 1203,2 | 7,229 | 147,40 | 442,69 | 0,7964 | 2,0341 |
| -33,0 | 2,288 | 2,197 | 1200,2 | 7,528 | 148,89 | 443,17 | 0,8026 | 2,0310 |
| -32,0 | 2,387 | 2,292 | 1197,2 | 7,837 | 150,39 | 443,66 | 0,8088 | 2,0279 |
| -31,0 | 2,488 | 2,390 | 1194,1 | 8,155 | 151,89 | 444,13 | 0,8150 | 2,0248 |
| -30,0 | 2,593 | 2,491 | 1191,1 | 8,484 | 153,40 | 444,61 | 0,8211 | 2,0217 |
| -29,0 | 2,702 | 2,596 | 1188,0 | 8,823 | 154,90 | 445,08 | 0,8273 | 2,0187 |
| -28,0 | 2,813 | 2,703 | 1184,9 | 9,172 | 156,41 | 445,54 | 0,8334 | 2,0157 |
| -27,0 | 2,929 | 2,815 | 1181,8 | 9,533 | 157,92 | 446,01 | 0,8395 | 2,0127 |
| -26,0 | 3,048 | 2,929 | 1178,7 | 9,904 | 159,44 | 446,46 | 0,8456 | 2,0098 |
| -25,0 | 3,170 | 3,048 | 1175,6 | 10,29 | 160,95 | 446,92 | 0,8517 | 2,0069 |

| Temperatur [°C] | Druck [bar] | | Dichte [kg/m³] | | Enthalpie [kJ/kg] | | Entropie [J/kg*K] | |
|--------------------|----------------|-----------|-------------------|-----------|----------------------|-----------|----------------------|-----------|
| | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig |
| -24,0 | 3,297 | 3,170 | 1172,4 | 10,68 | 162,47 | 447,37 | 0,8577 | 2,0040 |
| -23,0 | 3,427 | 3,295 | 1169,2 | 11,09 | 164,00 | 447,81 | 0,8638 | 2,0012 |
| -22,0 | 3,561 | 3,425 | 1166,1 | 11,51 | 165,52 | 448,25 | 0,8698 | 1,9984 |
| -21,0 | 3,699 | 3,558 | 1162,9 | 11,94 | 167,05 | 448,69 | 0,8759 | 1,9956 |
| -20,0 | 3,842 | 3,696 | 1159,7 | 12,38 | 168,58 | 449,12 | 0,8819 | 1,9928 |
| -19,0 | 3,988 | 3,837 | 1156,5 | 12,84 | 170,12 | 449,54 | 0,8879 | 1,9901 |
| -18,0 | 4,139 | 3,983 | 1153,2 | 13,31 | 171,66 | 449,96 | 0,8939 | 1,9873 |
| -17,0 | 4,294 | 4,132 | 1150,0 | 13,80 | 173,20 | 450,38 | 0,8999 | 1,9847 |
| -16,0 | 4,453 | 4,286 | 1146,7 | 14,30 | 174,74 | 450,79 | 0,9058 | 1,9820 |
| -15,0 | 4,617 | 4,445 | 1143,4 | 14,81 | 176,29 | 451,20 | 0,9118 | 1,9793 |
| -14,0 | 4,785 | 4,608 | 1140,1 | 15,34 | 177,85 | 451,60 | 0,9177 | 1,9767 |
| -13,0 | 4,958 | 4,775 | 1136,8 | 15,88 | 179,40 | 452,00 | 0,9237 | 1,9741 |
| -12,0 | 5,136 | 4,947 | 1133,5 | 16,44 | 180,96 | 452,39 | 0,9296 | 1,9715 |
| -11,0 | 5,319 | 5,124 | 1130,1 | 17,01 | 182,53 | 452,77 | 0,9355 | 1,9690 |
| -10,0 | 5,506 | 5,305 | 1126,8 | 17,60 | 184,09 | 453,15 | 0,9414 | 1,9664 |
| -9,0 | 5,699 | 5,491 | 1123,4 | 18,21 | 185,67 | 453,52 | 0,9473 | 1,9639 |
| -8,0 | 5,897 | 5,683 | 1120,0 | 18,83 | 187,24 | 453,89 | 0,9532 | 1,9614 |
| -7,0 | 6,099 | 5,879 | 1116,5 | 19,47 | 188,82 | 454,25 | 0,9591 | 1,9589 |
| -6,0 | 6,307 | 6,080 | 1113,1 | 20,13 | 190,40 | 454,61 | 0,9649 | 1,9564 |
| -5,0 | 6,521 | 6,287 | 1109,6 | 20,81 | 191,99 | 454,96 | 0,9708 | 1,9539 |
| -4,0 | 6,739 | 6,499 | 1106,1 | 21,51 | 193,59 | 455,30 | 0,9767 | 1,9515 |
| -3,0 | 6,964 | 6,716 | 1102,6 | 22,22 | 195,18 | 455,64 | 0,9825 | 1,9490 |
| -2,0 | 7,193 | 6,939 | 1099,1 | 22,95 | 196,78 | 455,97 | 0,9883 | 1,9466 |
| -1,0 | 7,429 | 7,167 | 1095,6 | 23,71 | 198,39 | 456,29 | 0,9942 | 1,9442 |
| 0,0 | 7,670 | 7,401 | 1092,0 | 24,48 | 200,00 | 456,61 | 1,0000 | 1,9418 |
| 1,0 | 7,918 | 7,641 | 1088,4 | 25,28 | 201,62 | 456,92 | 1,0058 | 1,9394 |
| 2,0 | 8,171 | 7,886 | 1084,8 | 26,10 | 203,24 | 457,22 | 1,0116 | 1,9370 |
| 3,0 | 8,430 | 8,138 | 1081,1 | 26,94 | 204,86 | 457,51 | 1,0174 | 1,9346 |
| 4,0 | 8,695 | 8,395 | 1077,5 | 27,80 | 206,49 | 457,80 | 1,0232 | 1,9323 |
| 5,0 | 8,967 | 8,659 | 1073,8 | 28,69 | 208,13 | 458,08 | 1,0290 | 1,9299 |
| 6,0 | 9,245 | 8,929 | 1070,0 | 29,60 | 209,77 | 458,35 | 1,0348 | 1,9276 |
| 7,0 | 9,529 | 9,205 | 1066,3 | 30,53 | 211,41 | 458,62 | 1,0406 | 1,9252 |
| 8,0 | 9,820 | 9,488 | 1062,5 | 31,49 | 213,07 | 458,87 | 1,0464 | 1,9229 |
| 9,0 | 10,12 | 9,777 | 1058,7 | 32,47 | 214,72 | 459,12 | 1,0522 | 1,9206 |
| 10,0 | 10,42 | 10,07 | 1054,9 | 33,48 | 216,39 | 459,36 | 1,0580 | 1,9182 |
| 11,0 | 10,73 | 10,38 | 1051,0 | 34,52 | 218,05 | 459,59 | 1,0638 | 1,9159 |
| 12,0 | 11,05 | 10,69 | 1047,1 | 35,59 | 219,73 | 459,81 | 1,0695 | 1,9136 |
| 13,0 | 11,38 | 11,00 | 1043,2 | 36,69 | 221,41 | 460,02 | 1,0753 | 1,9113 |
| 14,0 | 11,71 | 11,32 | 1039,3 | 37,81 | 223,10 | 460,22 | 1,0811 | 1,9089 |
| 15,0 | 12,05 | 11,65 | 1035,3 | 38,97 | 224,79 | 460,41 | 1,0869 | 1,9066 |

| Temperatur [°C] | Druck [bar] | | Dichte [kg/m³] | | Enthalpie [kJ/kg] | | Entropie [J/kg*K] | |
|--------------------|----------------|-----------|-------------------|-----------|----------------------|-----------|----------------------|-----------|
| | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig |
| 16,0 | 12,39 | 11,99 | 1031,3 | 40,15 | 226,49 | 460,60 | 1,0927 | 1,9043 |
| 17,0 | 12,75 | 12,34 | 1027,2 | 41,37 | 228,20 | 460,77 | 1,0984 | 1,9020 |
| 18,0 | 13,11 | 12,69 | 1023,1 | 42,62 | 229,91 | 460,93 | 1,1042 | 1,8996 |
| 19,0 | 13,48 | 13,05 | 1019,0 | 43,91 | 231,64 | 461,08 | 1,1100 | 1,8973 |
| 20,0 | 13,86 | 13,42 | 1014,9 | 45,23 | 233,36 | 461,22 | 1,1158 | 1,8950 |
| 21,0 | 14,24 | 13,79 | 1010,7 | 46,58 | 235,10 | 461,35 | 1,1215 | 1,8926 |
| 22,0 | 14,63 | 14,18 | 1006,4 | 47,98 | 236,84 | 461,47 | 1,1273 | 1,8903 |
| 23,0 | 15,03 | 14,57 | 1002,2 | 49,41 | 238,60 | 461,57 | 1,1331 | 1,8879 |
| 24,0 | 15,44 | 14,97 | 997,83 | 50,88 | 240,36 | 461,67 | 1,1389 | 1,8855 |
| 25,0 | 15,86 | 15,37 | 993,47 | 52,40 | 242,12 | 461,75 | 1,1447 | 1,8831 |
| 26,0 | 16,29 | 15,79 | 989,07 | 53,95 | 243,90 | 461,82 | 1,1505 | 1,8808 |
| 27,0 | 16,72 | 16,21 | 984,62 | 55,55 | 245,68 | 461,87 | 1,1563 | 1,8783 |
| 28,0 | 17,16 | 16,65 | 980,12 | 57,19 | 247,48 | 461,91 | 1,1621 | 1,8759 |
| 29,0 | 17,61 | 17,09 | 975,58 | 58,88 | 249,28 | 461,94 | 1,1680 | 1,8735 |
| 30,0 | 18,07 | 17,54 | 970,98 | 60,62 | 251,10 | 461,95 | 1,1738 | 1,8710 |
| 31,0 | 18,54 | 18,00 | 966,33 | 62,41 | 252,92 | 461,95 | 1,1796 | 1,8686 |
| 32,0 | 19,02 | 18,47 | 961,63 | 64,25 | 254,75 | 461,93 | 1,1855 | 1,8661 |
| 33,0 | 19,51 | 18,95 | 956,87 | 66,15 | 256,59 | 461,89 | 1,1914 | 1,8636 |
| 34,0 | 20,00 | 19,43 | 952,05 | 68,10 | 258,45 | 461,84 | 1,1972 | 1,8610 |
| 35,0 | 20,51 | 19,93 | 947,17 | 70,11 | 260,31 | 461,78 | 1,2031 | 1,8585 |
| 36,0 | 21,02 | 20,44 | 942,23 | 72,18 | 262,19 | 461,69 | 1,2090 | 1,8559 |
| 37,0 | 21,55 | 20,95 | 937,22 | 74,31 | 264,08 | 461,59 | 1,2150 | 1,8533 |
| 38,0 | 22,08 | 21,48 | 932,15 | 76,51 | 265,98 | 461,46 | 1,2209 | 1,8506 |
| 39,0 | 22,63 | 22,01 | 927,00 | 78,78 | 267,90 | 461,32 | 1,2268 | 1,8480 |
| 40,0 | 23,18 | 22,56 | 921,78 | 81,11 | 269,82 | 461,16 | 1,2328 | 1,8453 |
| 41,0 | 23,75 | 23,12 | 916,48 | 83,53 | 271,77 | 460,97 | 1,2388 | 1,8425 |
| 42,0 | 24,32 | 23,68 | 911,10 | 86,02 | 273,72 | 460,77 | 1,2448 | 1,8397 |
| 43,0 | 24,91 | 24,26 | 905,63 | 88,59 | 275,69 | 460,54 | 1,2509 | 1,8369 |
| 44,0 | 25,51 | 24,85 | 900,08 | 91,24 | 277,68 | 460,28 | 1,2569 | 1,8341 |
| 45,0 | 26,11 | 25,45 | 894,42 | 93,99 | 279,69 | 460,00 | 1,2630 | 1,8311 |
| 46,0 | 26,73 | 26,06 | 888,67 | 96,83 | 281,71 | 459,70 | 1,2692 | 1,8282 |
| 47,0 | 27,36 | 26,68 | 882,82 | 99,77 | 283,75 | 459,37 | 1,2753 | 1,8251 |
| 48,0 | 28,00 | 27,32 | 876,85 | 102,8 | 285,81 | 459,00 | 1,2815 | 1,8221 |
| 49,0 | 28,65 | 27,96 | 870,77 | 106,0 | 287,89 | 458,61 | 1,2878 | 1,8189 |
| 50,0 | 29,31 | 28,62 | 864,56 | 109,3 | 289,99 | 458,19 | 1,2940 | 1,8157 |
| 51,0 | 29,99 | 29,29 | 858,22 | 112,7 | 292,11 | 457,73 | 1,3004 | 1,8124 |
| 52,0 | 30,67 | 29,97 | 851,74 | 116,2 | 294,26 | 457,23 | 1,3067 | 1,8091 |
| 53,0 | 31,37 | 30,66 | 845,11 | 119,9 | 296,43 | 456,70 | 1,3131 | 1,8056 |
| 54,0 | 32,08 | 31,37 | 838,31 | 123,7 | 298,63 | 456,13 | 1,3196 | 1,8021 |
| 55,0 | 32,80 | 32,09 | 831,35 | 127,7 | 300,86 | 455,51 | 1,3262 | 1,7985 |

| Temperatur [°C] | Druck [bar] | | Dichte [kg/m³] | | Enthalpie [kJ/kg] | | Entropie [J/kg*K] | |
|--------------------|----------------|-----------|-------------------|-----------|----------------------|-----------|----------------------|-----------|
| | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig | flüssig | gasförmig |
| 56,0 | 33,54 | 32,82 | 824,20 | 131,8 | 303,12 | 454,85 | 1,3328 | 1,7948 |
| 57,0 | 34,28 | 33,56 | 816,85 | 136,2 | 305,41 | 454,14 | 1,3394 | 1,7909 |
| 58,0 | 35,04 | 34,32 | 809,29 | 140,7 | 307,74 | 453,38 | 1,3462 | 1,7869 |
| 59,0 | 35,82 | 35,10 | 801,49 | 145,5 | 310,10 | 452,56 | 1,3530 | 1,7828 |
| 60,0 | 36,60 | 35,88 | 793,44 | 150,5 | 312,51 | 451,67 | 1,3600 | 1,7786 |
| 61,0 | 37,40 | 36,69 | 785,11 | 155,8 | 314,97 | 450,72 | 1,3670 | 1,7742 |
| 62,0 | 38,21 | 37,50 | 776,47 | 161,3 | 317,47 | 449,70 | 1,3742 | 1,7696 |
| 63,0 | 39,04 | 38,33 | 767,49 | 167,2 | 320,03 | 448,59 | 1,3815 | 1,7647 |
| 64,0 | 39,88 | 39,18 | 758,12 | 173,4 | 322,65 | 447,39 | 1,3890 | 1,7597 |
| 65,0 | 40,73 | 40,04 | 748,33 | 180,1 | 325,34 | 446,09 | 1,3966 | 1,7544 |
| 66,0 | 41,60 | 40,92 | 738,06 | 187,2 | 328,11 | 444,68 | 1,4044 | 1,7488 |
| 67,0 | 42,49 | 41,82 | 727,22 | 194,8 | 330,97 | 443,13 | 1,4125 | 1,7429 |
| 68,0 | 43,39 | 42,73 | 715,74 | 203,1 | 333,93 | 441,43 | 1,4208 | 1,7366 |
| 69,0 | 44,30 | 43,67 | 703,50 | 212,1 | 337,02 | 439,55 | 1,4295 | 1,7297 |
| 70,0 | 45,23 | 44,62 | 690,34 | 222,0 | 340,25 | 437,46 | 1,4385 | 1,7224 |
| 71,0 | 46,18 | 45,59 | 676,05 | 233,0 | 343,67 | 435,10 | 1,4481 | 1,7143 |
| 72,0 | 47,14 | 46,58 | 660,31 | 245,4 | 347,32 | 432,41 | 1,4582 | 1,7052 |
| 73,0 | 48,12 | 47,60 | 642,62 | 259,7 | 351,28 | 429,27 | 1,4693 | 1,6950 |
| 74,0 | 49,11 | 48,64 | 622,13 | 276,8 | 355,70 | 425,48 | 1,4816 | 1,6829 |
| 75,0 | 50,12 | 49,71 | 597,08 | 298,4 | 360,87 | 420,67 | 1,4960 | 1,6680 |
| 76,0 | 51,15 | 50,82 | 562,69 | 329,0 | 367,59 | 413,84 | 1,5147 | 1,6474 |
| 77,0 | 52,15 | 52,03 | 484,93 | 400,1 | 381,90 | 398,42 | 1,5551 | 1,6023 |

Berechnet mit Refprop Version 10.0

Eine Garantie, Gewährleistung oder Haftung für die Richtigkeit, Vollständigkeit und Aktualität der zur Verfügung gestellten Inhalte und Informationen kann nicht übernommen werden.

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