

## Type E Thermocouple Table

Nickel-Chromium/Copper-Nickel, Electromotive Force as a function of temperature, E/ $\mu$ V  
As per Standard ASTM E230

| t90/°C | 0     | -1    | -2    | -3    | -4    | -5    | -6    | -7    | -8    | -9    | t90/°C |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| -270   | -9835 |       |       |       |       |       |       |       |       |       | -270   |
| -260   | -9797 | -9802 | -9808 | -9813 | -9817 | -9821 | -9825 | -9828 | -9831 | -9833 | -260   |
| -250   | -9718 | -9728 | -9737 | -9746 | -9754 | -6762 | -9770 | -9777 | -9784 | -9790 | -250   |
| -240   | -9604 | -9617 | -9630 | -9642 | -9654 | -9666 | -9677 | -9688 | -9698 | -9709 | -240   |
| -230   | -9455 | -9471 | -9487 | -9503 | -9519 | -9534 | -9548 | -9563 | -9577 | -9591 | -230   |
| -220   | -9274 | -9293 | -9313 | -9331 | -9350 | -9368 | -9386 | -9404 | -9421 | -9438 | -220   |
| -210   | -9063 | -9085 | -9107 | -9129 | -9151 | -9172 | -9193 | -9214 | -9234 | -9254 | -210   |
| -200   | -8825 | -8850 | -8874 | -8899 | -8923 | -8947 | -8971 | -8994 | -9017 | -9040 | -200   |
| -190   | -8561 | -8588 | -8616 | -8643 | -8669 | -8696 | -8722 | -8748 | -8774 | -8799 | -190   |
| -180   | -8273 | -8303 | -8333 | -8362 | -8391 | -8420 | -8449 | -8477 | -8505 | -8533 | -180   |
| -170   | -7963 | -7995 | -8027 | -8059 | -8090 | -8121 | -8152 | -8183 | -8213 | -8243 | -170   |
| -160   | -7632 | -7666 | -7700 | -7733 | -7767 | -7800 | -7833 | -7866 | -7899 | -7931 | -160   |
| -150   | -7279 | -7315 | -7351 | -7387 | -7423 | -7458 | -7493 | -7528 | -7563 | -7597 | -150   |
| -140   | -6907 | -6945 | -6983 | -7021 | -7058 | -7096 | -7133 | -7170 | -7206 | -7243 | -140   |
| -130   | -6516 | -6556 | -6596 | -6636 | -6675 | -6714 | -6753 | -6792 | -6831 | -6869 | -130   |
| -120   | -6107 | -6149 | -6191 | -6232 | -6273 | -6314 | -6355 | -6396 | -6436 | -6476 | -120   |
| -110   | -5681 | -5724 | -5767 | -5210 | -5853 | -5896 | -5939 | -5981 | -6023 | -6065 | -110   |
| -100   | -5237 | -5282 | -5327 | -5372 | -5417 | -5461 | -5505 | -5549 | -5593 | -5637 | -100   |
| -90    | -4777 | -4824 | -4871 | -4317 | -4963 | -5009 | -5055 | -5101 | -5147 | -5192 | -90    |
| -80    | -4302 | -4350 | -4398 | -4446 | -4494 | -4542 | -4589 | -4636 | -4684 | -4731 | -80    |
| -70    | -3811 | -3861 | -3911 | -3960 | -4009 | -4058 | -4107 | -4156 | -4205 | -4254 | -70    |
| -60    | -3306 | -3357 | -3408 | -3459 | -3510 | -3561 | -3611 | -3661 | -3711 | -3761 | -60    |
| -50    | -2787 | -2840 | -2892 | -2944 | -2996 | -3048 | -3100 | -3152 | -3204 | -3255 | -50    |
| -40    | -2255 | -2309 | -2362 | -2416 | -2469 | -2523 | -2576 | -2629 | -2682 | -2735 | -40    |
| -30    | -1709 | -1765 | -1820 | -1874 | -1929 | -1984 | -2038 | -2093 | -2147 | -2201 | -30    |
| -20    | -1152 | -1208 | -1264 | -1320 | -1376 | -1432 | -1488 | -1543 | -1599 | -1654 | -20    |
| -10    | -582  | -639  | -697  | -754  | -811  | -868  | -925  | -982  | -1039 | -1095 | -10    |
| 0      | 0     | -59   | -117  | -176  | -234  | -292  | -350  | -408  | -466  | -524  | 0      |
| t90/°C | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | t90/°C |
| 0      | 0     | 59    | 118   | 176   | 235   | 294   | 354   | 413   | 472   | 532   | 0      |
| 10     | 591   | 651   | 711   | 770   | 830   | 890   | 950   | 1010  | 1071  | 1131  | 10     |
| 20     | 1192  | 1252  | 1313  | 1373  | 1434  | 1495  | 1556  | 1617  | 1678  | 1740  | 20     |
| 30     | 1801  | 1862  | 1924  | 1986  | 2047  | 2109  | 2171  | 2233  | 2295  | 2357  | 30     |
| 40     | 2420  | 2482  | 2545  | 2607  | 2670  | 2733  | 2795  | 2858  | 2921  | 2984  | 40     |
| 50     | 3048  | 3111  | 3174  | 3238  | 3301  | 3365  | 3429  | 3492  | 3556  | 3620  | 50     |
| 60     | 3685  | 3749  | 3813  | 3877  | 3942  | 4006  | 4071  | 4136  | 4200  | 4265  | 60     |
| 70     | 4330  | 4395  | 4460  | 4526  | 4591  | 4656  | 4722  | 4788  | 4853  | 4919  | 70     |
| 80     | 4985  | 5051  | 5117  | 5183  | 5249  | 5315  | 5382  | 5448  | 5514  | 5581  | 80     |
| 90     | 5648  | 5714  | 5781  | 5848  | 5915  | 5982  | 6049  | 6117  | 6184  | 6251  | 90     |
| 100    | 6319  | 6386  | 6454  | 6522  | 6590  | 6658  | 6725  | 6794  | 6892  | 6930  | 100    |
| 110    | 6998  | 7066  | 7135  | 7203  | 7272  | 7341  | 7409  | 7478  | 7547  | 7616  | 110    |
| 120    | 7685  | 7754  | 7823  | 7892  | 7962  | 8031  | 8101  | 8170  | 8240  | 8309  | 120    |
| 130    | 8379  | 8449  | 8519  | 8589  | 8659  | 8729  | 8799  | 8869  | 8940  | 9010  | 130    |
| 140    | 9081  | 9151  | 9222  | 9292  | 9363  | 9434  | 9505  | 9576  | 9647  | 9718  | 140    |
| 150    | 9789  | 9860  | 9931  | 10003 | 10074 | 10145 | 10217 | 10288 | 10360 | 10432 | 150    |
| 160    | 10503 | 10575 | 10647 | 10719 | 10791 | 10863 | 10935 | 11007 | 11080 | 11152 | 160    |
| 170    | 11224 | 11297 | 11369 | 11442 | 11514 | 11587 | 11660 | 11733 | 11805 | 11878 | 170    |
| 180    | 11951 | 12024 | 12097 | 12170 | 12243 | 12317 | 12390 | 12463 | 12537 | 12610 | 180    |
| 190    | 12684 | 12757 | 12831 | 12904 | 12978 | 13052 | 13126 | 13199 | 13273 | 13347 | 190    |
| 200    | 13421 | 13495 | 13569 | 13644 | 13718 | 13792 | 13866 | 13941 | 14015 | 14090 | 200    |
| 210    | 14164 | 14239 | 14313 | 14388 | 14463 | 14537 | 14612 | 14687 | 14762 | 14837 | 210    |
| 220    | 14912 | 14987 | 15062 | 15137 | 15212 | 15287 | 15362 | 15438 | 15513 | 15588 | 220    |
| 230    | 15664 | 15739 | 15815 | 15890 | 15966 | 16041 | 16117 | 16193 | 16269 | 16344 | 230    |
| 240    | 16420 | 16496 | 16572 | 16648 | 16724 | 16800 | 16876 | 16952 | 17028 | 17104 | 240    |
| 250    | 17181 | 17257 | 17333 | 17409 | 17486 | 17562 | 17639 | 17715 | 17792 | 17868 | 250    |
| 260    | 17945 | 18021 | 18098 | 18175 | 18252 | 18328 | 18405 | 18482 | 18559 | 18636 | 260    |
| 270    | 18713 | 18790 | 18867 | 18944 | 19021 | 19098 | 19175 | 19252 | 19330 | 19407 | 270    |
| 280    | 19484 | 19561 | 19639 | 19716 | 19794 | 19871 | 19948 | 20026 | 20103 | 20181 | 280    |
| 290    | 20259 | 20336 | 20414 | 20492 | 20569 | 20647 | 20725 | 20803 | 20880 | 20958 | 290    |
| 300    | 21036 | 21114 | 21192 | 21270 | 21348 | 21426 | 21504 | 21582 | 21660 | 21739 | 300    |
| 310    | 21817 | 21895 | 21973 | 22051 | 22130 | 22208 | 22286 | 22365 | 22443 | 22522 | 310    |
| 320    | 22600 | 22678 | 22757 | 22835 | 22914 | 22993 | 23071 | 23150 | 23228 | 23307 | 320    |
| 330    | 23386 | 23464 | 23543 | 23622 | 23701 | 23780 | 23858 | 23937 | 24016 | 24095 | 330    |
| 340    | 24174 | 24253 | 24332 | 24411 | 24490 | 24569 | 24648 | 24727 | 24806 | 24885 | 340    |

## Type E Thermocouple Table

Nickel-Chromium/Copper-Nickel, Electromotive Force as a function of temperature, E/ $\mu$ V  
As per Standard ASTM E230

| t90/°C | 0     | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8     | 9     | t90/°C |
|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|
| 350    | 24964 | 25044 | 25123 | 25202 | 25281 | 25360 | 25440 | 25519 | 25598 | 25678 | 350    |
| 360    | 25757 | 25836 | 25916 | 25995 | 26075 | 26154 | 26233 | 26313 | 26392 | 26472 | 360    |
| 370    | 26552 | 26631 | 26711 | 26790 | 26870 | 26950 | 27029 | 27109 | 27189 | 27268 | 370    |
| 380    | 27348 | 27428 | 27507 | 27587 | 27667 | 27747 | 27827 | 27907 | 27986 | 28066 | 380    |
| 390    | 28146 | 28226 | 28306 | 28386 | 28466 | 28546 | 28626 | 28706 | 28786 | 28866 | 390    |
| 400    | 28946 | 29026 | 29106 | 29186 | 29266 | 29346 | 29427 | 29507 | 29587 | 29667 | 400    |
| 410    | 29747 | 29827 | 29908 | 29988 | 30068 | 30148 | 30229 | 30309 | 30389 | 30470 | 410    |
| 420    | 30550 | 30630 | 30711 | 30791 | 30871 | 30952 | 31032 | 31112 | 31193 | 31273 | 420    |
| 430    | 31354 | 31434 | 31515 | 31595 | 31676 | 31756 | 31837 | 31917 | 31998 | 32078 | 430    |
| 440    | 32159 | 32239 | 32320 | 32400 | 32481 | 32562 | 32642 | 32723 | 32803 | 32884 | 440    |
| 450    | 32965 | 33045 | 33126 | 33207 | 33287 | 33368 | 33449 | 33529 | 33610 | 33691 | 450    |
| 460    | 33772 | 33852 | 33933 | 34014 | 34095 | 34175 | 34256 | 34337 | 34418 | 34498 | 460    |
| 470    | 34579 | 34660 | 34741 | 34822 | 34902 | 34983 | 35064 | 35145 | 35226 | 35307 | 470    |
| 480    | 35387 | 35468 | 35549 | 35630 | 35711 | 35792 | 35873 | 35954 | 36034 | 36115 | 480    |
| 490    | 36196 | 36244 | 36358 | 36439 | 36520 | 36601 | 36682 | 36763 | 36843 | 36924 | 490    |
| 500    | 37005 | 37086 | 37167 | 37248 | 37329 | 37410 | 37491 | 37572 | 37653 | 37734 | 500    |
| 510    | 37815 | 37896 | 37977 | 38058 | 38139 | 38220 | 38300 | 38381 | 38462 | 38543 | 510    |
| 520    | 38624 | 38705 | 38786 | 38867 | 38948 | 39029 | 39110 | 39191 | 39272 | 39353 | 520    |
| 530    | 39434 | 39515 | 39596 | 39677 | 39758 | 39839 | 39920 | 40001 | 40082 | 40163 | 530    |
| 540    | 40243 | 40324 | 40405 | 40486 | 40567 | 40648 | 40729 | 40810 | 40891 | 40972 | 540    |
| 550    | 41053 | 41134 | 41215 | 41296 | 41377 | 41457 | 41538 | 41619 | 41700 | 41781 | 550    |
| 560    | 41862 | 41943 | 42024 | 42105 | 42185 | 42266 | 42347 | 42428 | 42509 | 42590 | 560    |
| 570    | 42671 | 42751 | 42832 | 42913 | 42994 | 43075 | 43156 | 43236 | 43317 | 43398 | 570    |
| 580    | 43479 | 43560 | 43640 | 43721 | 43802 | 43883 | 43963 | 44044 | 44125 | 44206 | 580    |
| 590    | 44286 | 44367 | 44448 | 44529 | 44609 | 44690 | 44771 | 44851 | 44932 | 45013 | 590    |
| 600    | 45093 | 45174 | 45255 | 45335 | 45416 | 45497 | 45577 | 45658 | 45738 | 45819 | 600    |
| 610    | 45900 | 45980 | 46061 | 46141 | 46222 | 46302 | 46383 | 46463 | 46544 | 46624 | 610    |
| 620    | 46705 | 46785 | 46866 | 46946 | 47027 | 47107 | 47188 | 47268 | 47349 | 47429 | 620    |
| 630    | 47509 | 47590 | 47670 | 47751 | 47831 | 47911 | 47992 | 48072 | 48152 | 48233 | 630    |
| 640    | 48313 | 48393 | 48474 | 48554 | 48634 | 48715 | 48795 | 48875 | 48955 | 49035 | 640    |
| 650    | 49116 | 49196 | 49276 | 49356 | 49436 | 49517 | 49597 | 49677 | 49757 | 49837 | 650    |
| 660    | 49917 | 49997 | 50077 | 50157 | 50238 | 50318 | 50398 | 50478 | 50558 | 50638 | 660    |
| 670    | 50718 | 50798 | 50878 | 50958 | 51038 | 51118 | 51197 | 51277 | 51357 | 51437 | 670    |
| 680    | 51517 | 51597 | 51677 | 51757 | 51837 | 51916 | 51996 | 52076 | 52156 | 52236 | 680    |
| 690    | 52315 | 52395 | 52475 | 52555 | 52634 | 52714 | 52794 | 52873 | 52953 | 53033 | 690    |
| 700    | 53112 | 53192 | 53272 | 53351 | 53431 | 53510 | 53590 | 53670 | 53749 | 53829 | 700    |
| 710    | 53908 | 53988 | 54067 | 54147 | 54226 | 54306 | 54385 | 54465 | 54544 | 54624 | 710    |
| 720    | 54703 | 54782 | 54862 | 54941 | 55021 | 55100 | 55179 | 55259 | 55338 | 55417 | 720    |
| 730    | 55497 | 55576 | 55655 | 55734 | 55814 | 55893 | 55972 | 56051 | 56131 | 56210 | 730    |
| 740    | 56289 | 56368 | 56447 | 56526 | 56606 | 56685 | 56764 | 56843 | 56922 | 57001 | 740    |
| 750    | 57080 | 57159 | 57238 | 57317 | 57396 | 57475 | 57554 | 57633 | 57712 | 57791 | 750    |
| 760    | 57870 | 57949 | 58028 | 58107 | 58186 | 58265 | 58344 | 58422 | 58501 | 58580 | 760    |
| 770    | 58659 | 58738 | 58816 | 58895 | 58974 | 59053 | 59131 | 59210 | 59289 | 59367 | 770    |
| 780    | 59446 | 59525 | 59604 | 59682 | 59761 | 59839 | 59918 | 59997 | 60075 | 60154 | 780    |
| 790    | 60232 | 60311 | 60390 | 60468 | 60547 | 60625 | 60704 | 60782 | 60860 | 60939 | 790    |
| 800    | 61017 | 61096 | 61174 | 61253 | 61331 | 61409 | 61488 | 61566 | 61644 | 61723 | 800    |
| 810    | 61801 | 61879 | 61958 | 62036 | 62114 | 62192 | 62271 | 62349 | 62427 | 62505 | 810    |
| 820    | 62583 | 62662 | 62740 | 62818 | 62896 | 62974 | 63052 | 63130 | 63208 | 63286 | 820    |
| 830    | 63364 | 63445 | 63520 | 63598 | 63676 | 63754 | 63832 | 63910 | 63988 | 64066 | 830    |
| 840    | 64144 | 64222 | 64300 | 64377 | 64455 | 64533 | 64611 | 64689 | 64766 | 64844 | 840    |
| 850    | 64922 | 65000 | 65077 | 65155 | 65233 | 65310 | 65388 | 65465 | 65543 | 65621 | 850    |
| 860    | 65698 | 65776 | 65853 | 65931 | 66008 | 66086 | 66163 | 66241 | 66318 | 66396 | 860    |
| 870    | 66473 | 66550 | 66628 | 66705 | 66782 | 66860 | 66937 | 67014 | 67092 | 67169 | 870    |
| 880    | 67246 | 67323 | 67400 | 67478 | 67555 | 67632 | 67709 | 67786 | 67863 | 67940 | 880    |
| 890    | 68017 | 68094 | 68171 | 68248 | 68325 | 68402 | 68479 | 68556 | 68633 | 68710 | 890    |
| 900    | 68787 | 68863 | 68940 | 69017 | 69094 | 69171 | 69247 | 69324 | 69401 | 69477 | 900    |
| 910    | 69554 | 69631 | 69707 | 69784 | 69860 | 69937 | 70013 | 70090 | 70166 | 70243 | 910    |
| 920    | 70319 | 70396 | 70472 | 70548 | 70625 | 70701 | 70777 | 70854 | 70930 | 71006 | 920    |
| 930    | 71082 | 71159 | 71235 | 71311 | 71387 | 71463 | 71539 | 71615 | 71692 | 71768 | 930    |
| 940    | 71844 | 71920 | 71996 | 72072 | 72147 | 72223 | 72299 | 72375 | 72451 | 72527 | 940    |
| 950    | 72603 | 72678 | 72754 | 72830 | 72906 | 72981 | 73057 | 73133 | 73208 | 73284 | 950    |
| 960    | 73360 | 73435 | 73511 | 73586 | 73662 | 73738 | 73813 | 73889 | 73964 | 74040 | 960    |
| 970    | 74115 | 74190 | 74266 | 74341 | 74417 | 74492 | 74567 | 74643 | 74718 | 74793 | 970    |
| 980    | 74869 | 74944 | 75019 | 75095 | 75170 | 75245 | 75320 | 75395 | 75471 | 75546 | 980    |
| 990    | 75621 | 75696 | 75771 | 75847 | 75922 | 75997 | 76072 | 76147 | 76223 | 76298 | 990    |
| 1000   | 76373 |       |       |       |       |       |       |       |       |       | 1000   |