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HEAT TRANSFER FLUIDS

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XCEL THERM[®] SST – Engineering Properties

High operating temperature of 700°F (370°C) at low pressure; liquid phase heat transfer fluid for demanding applications

| Temperature | | Viscosity | | Density | | Specific Heat | | Thermal Conductivity | | Vapor Pressure | |
|-------------|-------|--------------------|--------|--------------------|-------------------|---------------|-------|----------------------|--------|----------------|--------------------|
| °F | °C | mm ² /s | cP | lb/ft ³ | Kg/m ³ | BTU/lb-°F | J/g-K | BTU/ft-hr-°F | W/m-K | psia | Kg/cm ² |
| 50 | 10.0 | 48.0 | 46.364 | 60.3 | 965.9 | 0.4550 | 1.905 | 0.0665 | 0.1151 | 0.0000 | 0.0000 |
| 60 | 15.6 | 33.0 | 31.679 | 59.9 | 960.0 | 0.4580 | 1.918 | 0.0662 | 0.1146 | 0.0000 | 0.0000 |
| 70 | 21.1 | 24.0 | 22.897 | 59.6 | 954.0 | 0.4610 | 1.930 | 0.0659 | 0.1141 | 0.0000 | 0.0000 |
| 80 | 26.7 | 17.8 | 16.876 | 59.2 | 948.1 | 0.4640 | 1.943 | 0.0656 | 0.1135 | 0.0000 | 0.0000 |
| 90 | 32.2 | 14.5 | 13.662 | 58.8 | 942.2 | 0.4670 | 1.955 | 0.0653 | 0.1130 | 0.0000 | 0.0000 |
| 100 | 37.8 | 11.9 | 11.141 | 58.4 | 936.2 | 0.4700 | 1.968 | 0.0650 | 0.1125 | 0.0000 | 0.0000 |
| 110 | 43.3 | 9.60 | 8.931 | 58.1 | 930.3 | 0.4730 | 1.980 | 0.0647 | 0.1120 | 0.0000 | 0.0000 |
| 120 | 48.9 | 7.90 | 7.303 | 57.7 | 924.4 | 0.4760 | 1.993 | 0.0644 | 0.1115 | 0.0000 | 0.0000 |
| 130 | 54.4 | 6.70 | 6.154 | 57.3 | 918.4 | 0.4790 | 2.005 | 0.0641 | 0.1109 | 0.0001 | 0.0000 |
| 140 | 60.0 | 5.75 | 5.247 | 57.0 | 912.5 | 0.4820 | 2.018 | 0.0638 | 0.1104 | 0.0001 | 0.0000 |
| 150 | 65.6 | 5.00 | 4.533 | 56.6 | 906.6 | 0.4850 | 2.031 | 0.0635 | 0.1099 | 0.0001 | 0.0000 |
| 160 | 71.1 | 4.30 | 3.873 | 56.2 | 900.6 | 0.4880 | 2.043 | 0.0632 | 0.1094 | 0.0002 | 0.0000 |
| 170 | 76.7 | 3.80 | 3.400 | 55.9 | 894.7 | 0.4910 | 2.056 | 0.0629 | 0.1089 | 0.0002 | 0.0000 |
| 180 | 82.2 | 3.40 | 3.022 | 55.5 | 888.8 | 0.4940 | 2.068 | 0.0626 | 0.1083 | 0.0003 | 0.0000 |
| 190 | 87.8 | 3.03 | 2.675 | 55.1 | 882.8 | 0.4970 | 2.081 | 0.0623 | 0.1078 | 0.0004 | 0.0000 |
| 200 | 93.3 | 2.71 | 2.376 | 54.7 | 876.9 | 0.5000 | 2.093 | 0.0620 | 0.1073 | 0.0006 | 0.0000 |
| 210 | 98.9 | 2.45 | 2.134 | 54.4 | 871.0 | 0.5030 | 2.106 | 0.0617 | 0.1068 | 0.0008 | 0.0001 |
| 220 | 104.4 | 2.23 | 1.929 | 54.0 | 865.0 | 0.5060 | 2.119 | 0.0614 | 0.1063 | 0.0012 | 0.0001 |
| 230 | 110.0 | 2.02 | 1.735 | 53.6 | 859.1 | 0.5090 | 2.131 | 0.0611 | 0.1057 | 0.0016 | 0.0001 |
| 240 | 115.6 | 1.84 | 1.570 | 53.3 | 853.2 | 0.5120 | 2.144 | 0.0608 | 0.1052 | 0.0023 | 0.0002 |
| 250 | 121.1 | 1.67 | 1.415 | 52.9 | 847.2 | 0.5150 | 2.156 | 0.0605 | 0.1047 | 0.0032 | 0.0002 |
| 260 | 126.7 | 1.55 | 1.304 | 52.5 | 841.3 | 0.5180 | 2.169 | 0.0602 | 0.1042 | 0.0045 | 0.0003 |
| 270 | 132.2 | 1.45 | 1.211 | 52.1 | 835.3 | 0.5210 | 2.181 | 0.0599 | 0.1037 | 0.0063 | 0.0004 |
| 280 | 137.8 | 1.37 | 1.136 | 51.8 | 829.4 | 0.5240 | 2.194 | 0.0596 | 0.1032 | 0.0088 | 0.0006 |
| 290 | 143.3 | 1.30 | 1.071 | 51.4 | 823.5 | 0.5270 | 2.206 | 0.0593 | 0.1026 | 0.0124 | 0.0009 |
| 300 | 148.9 | 1.23 | 1.006 | 51.0 | 817.5 | 0.5300 | 2.219 | 0.0590 | 0.1021 | 0.0173 | 0.0012 |
| 310 | 154.4 | 1.17 | 0.950 | 50.7 | 811.6 | 0.5330 | 2.232 | 0.0587 | 0.1016 | 0.0243 | 0.0017 |
| 320 | 160.0 | 1.11 | 0.894 | 50.3 | 805.7 | 0.5360 | 2.244 | 0.0584 | 0.1011 | 0.0341 | 0.0024 |
| 330 | 165.6 | 1.05 | 0.840 | 49.9 | 799.7 | 0.5390 | 2.257 | 0.0581 | 0.1006 | 0.0478 | 0.0034 |
| 340 | 171.1 | 1.000 | 0.794 | 49.6 | 793.8 | 0.5420 | 2.269 | 0.0578 | 0.1000 | 0.0671 | 0.0047 |
| 350 | 176.7 | 0.960 | 0.756 | 49.2 | 787.9 | 0.5450 | 2.282 | 0.0575 | 0.0995 | 0.0941 | 0.0066 |
| 360 | 182.2 | 0.920 | 0.719 | 48.8 | 781.9 | 0.5480 | 2.294 | 0.0572 | 0.0990 | 0.1320 | 0.0093 |
| 370 | 187.8 | 0.880 | 0.683 | 48.4 | 776.0 | 0.5510 | 2.307 | 0.0569 | 0.0985 | 0.1851 | 0.0130 |
| 380 | 193.3 | 0.840 | 0.647 | 48.1 | 770.1 | 0.5540 | 2.319 | 0.0566 | 0.0980 | 0.2597 | 0.0183 |
| 390 | 198.9 | 0.810 | 0.619 | 47.7 | 764.1 | 0.5570 | 2.332 | 0.0563 | 0.0974 | 0.3642 | 0.0256 |
| 400 | 204.4 | 0.780 | 0.591 | 47.3 | 758.2 | 0.5600 | 2.345 | 0.0560 | 0.0969 | 0.5108 | 0.0359 |
| 410 | 210.0 | 0.745 | 0.560 | 47.0 | 752.3 | 0.5630 | 2.357 | 0.0557 | 0.0964 | 0.5926 | 0.0417 |
| 420 | 215.6 | 0.710 | 0.530 | 46.6 | 746.3 | 0.5660 | 2.370 | 0.0554 | 0.0959 | 0.6954 | 0.0489 |
| 430 | 221.1 | 0.680 | 0.503 | 46.2 | 740.4 | 0.5690 | 2.382 | 0.0551 | 0.0954 | 0.8160 | 0.0574 |
| 440 | 226.7 | 0.660 | 0.485 | 45.9 | 734.5 | 0.5720 | 2.395 | 0.0548 | 0.0948 | 0.9576 | 0.0673 |
| 450 | 232.2 | 0.640 | 0.466 | 45.5 | 728.5 | 0.5750 | 2.407 | 0.0545 | 0.0943 | 1.1238 | 0.0790 |
| 460 | 237.8 | 0.620 | 0.448 | 45.1 | 722.6 | 0.5780 | 2.420 | 0.0542 | 0.0938 | 1.3188 | 0.0927 |
| 470 | 243.3 | 0.600 | 0.430 | 44.7 | 716.6 | 0.5810 | 2.433 | 0.0539 | 0.0933 | 1.5476 | 0.1088 |
| 480 | 248.9 | 0.580 | 0.412 | 44.4 | 710.7 | 0.5840 | 2.445 | 0.0536 | 0.0928 | 1.8161 | 0.1277 |
| 490 | 254.4 | 0.560 | 0.395 | 44.0 | 704.8 | 0.5870 | 2.458 | 0.0533 | 0.0922 | 2.1313 | 0.1498 |
| 500 | 260.0 | 0.540 | 0.377 | 43.6 | 698.8 | 0.5900 | 2.470 | 0.0530 | 0.0917 | 2.4796 | 0.1743 |
| 510 | 265.6 | 0.520 | 0.360 | 43.3 | 692.9 | 0.5930 | 2.483 | 0.0527 | 0.0912 | 2.8223 | 0.1984 |
| 520 | 271.1 | 0.505 | 0.347 | 42.9 | 687.0 | 0.5960 | 2.495 | 0.0524 | 0.0907 | 3.2123 | 0.2259 |
| 530 | 276.7 | 0.490 | 0.334 | 42.5 | 681.0 | 0.5990 | 2.508 | 0.0521 | 0.0902 | 3.6562 | 0.2571 |
| 540 | 282.2 | 0.475 | 0.321 | 42.1 | 675.1 | 0.6020 | 2.520 | 0.0518 | 0.0897 | 4.1615 | 0.2926 |
| 550 | 287.8 | 0.460 | 0.308 | 41.8 | 669.2 | 0.6050 | 2.533 | 0.0515 | 0.0891 | 4.6430 | 0.3264 |
| 560 | 293.3 | 0.450 | 0.298 | 41.4 | 663.2 | 0.6080 | 2.546 | 0.0512 | 0.0886 | 5.3259 | 0.3745 |
| 570 | 298.9 | 0.439 | 0.289 | 41.0 | 657.3 | 0.6110 | 2.558 | 0.0509 | 0.0881 | 6.1092 | 0.4295 |
| 580 | 304.4 | 0.423 | 0.276 | 40.7 | 651.4 | 0.6140 | 2.571 | 0.0506 | 0.0876 | 7.0078 | 0.4927 |
| 590 | 310.0 | 0.413 | 0.267 | 40.3 | 645.4 | 0.6170 | 2.583 | 0.0503 | 0.0871 | 8.0385 | 0.5652 |
| 600 | 315.6 | 0.407 | 0.260 | 39.9 | 639.5 | 0.6200 | 2.596 | 0.0500 | 0.0865 | 9.2209 | 0.6483 |
| 610 | 321.1 | 0.395 | 0.250 | 39.6 | 633.6 | 0.6230 | 2.608 | 0.0497 | 0.0860 | 10.5771 | 0.7437 |
| 620 | 326.7 | 0.390 | 0.245 | 39.2 | 627.6 | 0.6260 | 2.621 | 0.0494 | 0.0855 | 12.1328 | 0.8531 |
| 630 | 332.2 | 0.385 | 0.239 | 38.8 | 621.7 | 0.6290 | 2.633 | 0.0491 | 0.0850 | 14.0405 | 0.9872 |
| 640 | 337.8 | 0.380 | 0.234 | 38.4 | 615.8 | 0.6320 | 2.646 | 0.0488 | 0.0845 | 15.6383 | 1.0995 |
| 650 | 343.3 | 0.375 | 0.229 | 38.1 | 609.8 | 0.6350 | 2.659 | 0.0485 | 0.0839 | 17.4179 | 1.2247 |
| 660 | 348.9 | 0.350 | 0.211 | 37.7 | 603.9 | 0.6380 | 2.671 | 0.0482 | 0.0834 | 19.4001 | 1.3640 |
| 670 | 354.4 | 0.345 | 0.206 | 37.3 | 597.9 | 0.6410 | 2.684 | 0.0479 | 0.0829 | 21.6078 | 1.5192 |
| 680 | 360.0 | 0.340 | 0.201 | 37.0 | 592.0 | 0.6440 | 2.696 | 0.0476 | 0.0824 | 24.0668 | 1.6921 |
| 690 | 365.6 | 0.335 | 0.196 | 36.6 | 586.1 | 0.6470 | 2.709 | 0.0473 | 0.0819 | 26.8056 | 1.8847 |
| 700 | 371.1 | 0.330 | 0.191 | 36.2 | 580.1 | 0.6500 | 2.721 | 0.0470 | 0.0813 | 29.8560 | 2.0992 |

Data Represents typical laboratory samples and are not guaranteed for all samples