

合金の熱特性早見表

7.9 g/cm ³ Low Alloyed Steels Carbon Steels 11 - 17 mm ² /s 40 - 60 W/(m·K) - J/g 1147 - 1536 °C 12e-6 1/K	7.8 g/cm ³ Alloyed Steels X12 CrNi25 21, AISI 310 (1.4845, austenitic) 3.4 mm ² /s 13 W/(m·K) 237 J/g 1330 - 1400 °C 16e-6 1/K (20-200°C)	7.9 g/cm ³ Alloyed Steels X5 CrNi18-10, AISI 304 (1.4301, austenitic) 0.5 J/(g·K) 3.8 mm ² /s 15 W/(m·K) - J/g 1420 - 1470 °C 17e-6 1/K (20-200°C)	7.7 g/cm ³ Alloyed Steels X10 CrAlSi 7 (1.4713, ferritic) 0.45 J/(g·K) 6.6 mm ² /s 23 W/(m·K) - J/g 1450 °C 11e-6 1/K (20-200°C)	7.0 - 7.3 g/cm ³ Iron Cast Alloys Cast Iron 0.46 - 0.55 J/(g·K) 9 - 18 mm ² /s 30 - 63 W/(m·K) 234 J/g 1128 - 1227 °C 10 to 12e-6 1/K	2.44 g/cm ³ Al - Si Al65%Si 0.85 J/(g·K) 64 mm ² /s 131 W/(m·K) - J/g 577 - 880 °C - 1/K	2.7 g/cm ³ Al - Si AlSi10Mg (EN AC-43000) 0.85 J/(g·K) 66 mm ² /s 150 W/(m·K) 434 J/g 559 °C 20e-6 1/K	2.7 g/cm ³ Al - Si AlSi9Cu3 (EN AC-46000) 0.83 J/(g·K) 53 mm ² /s 119 W/(m·K) 438 J/g 505 °C 20e-6 1/K	2.4 g/cm ³ Al - Mg AlMg15 Si8Cu2 0.93 J/(g·K) 38 mm ² /s 95 W/(m·K) 387 J/g 576 °C - 1/K	2.4 g/cm ³ Al - Mg AlMg20,5 Si11Cu2 0.96 J/(g·K) 38 mm ² /s 87 W/(m·K) 286 J/g 579 °C - 1/K	2.4 g/cm ³ Al - Mg AlMg23,7 Si12,8Cu2 0.8 J/(g·K) 36 mm ² /s 68 W/(m·K) 290 J/g 574 °C - 1/K	2.7 g/cm ³ Al - Mg AlMg4,5Mn (EN AW-5083) 0.82 J/(g·K) 48 mm ² /s 105 W/(m·K) - J/g 575 - 640 °C 24e-6 1/K (20-100°C)	15.4 g/cm ³ Au - Ag Au-Ag-Cu (75%Au) 0.29 J/(g·K) 20 mm ² /s 89 W/(m·K) - J/g 870 - 900 °C 16e-6 1/K (20-100°C)	14.8 g/cm ³ Au - Cu Au-Cu (75%Au) 0.15 J/(g·K) 19 mm ² /s 41 W/(m·K) - J/g 870 - 900 °C - 1/K	16.2 g/cm ³ Au - Pd Au-Pd 0.16 J/(g·K) 17 mm ² /s 44 W/(m·K) 93 J/g 1075 °C - 1/K	14.7 g/cm ³ Au - Ni Au-Ni 0.25 J/(g·K) 8.5 mm ² /s 31 W/(m·K) - J/g 920 - 960 °C - 1/K	8.9 g/cm ³ Brass (Cu-Zn) acc. to EN: CuZn5 (CW500L) 0.38 J/(g·K) 72 mm ² /s 243 W/(m·K) - J/g 1060 °C 18e-6 1/K	8.8 g/cm ³ Brass (Cu-Zn) acc. to EN: CuZn5 (CW502L) 0.38 J/(g·K) 48 mm ² /s 159 W/(m·K) - J/g 1000 - 1030 °C 19e-6 1/K	8.6 g/cm ³ Brass (Cu-Zn) acc. to EN: CuZn30 (CW505L) 0.38 J/(g·K) 39 mm ² /s 126 W/(m·K) - J/g 910 - 950 °C 20e-6 1/K	8.4 g/cm ³ Brass (Cu-Zn) acc. to EN: CuZn37 (CW508L) 0.38 J/(g·K) 37 mm ² /s 120 W/(m·K) - J/g 902 - 920 °C 20e-6 1/K	8.2 g/cm ³ Special Brass acc. to EN: CuZn23 Al3Co 0.38 J/(g·K) 25 mm ² /s 78 W/(m·K) - J/g - °C 18e-6 1/K	8.4 g/cm ³ Special Brass acc. to EN: CuZn39 Pb2 (CW612N) 0.38 J/(g·K) 34 mm ² /s 109 W/(m·K) - J/g - °C 21e-6 1/K	8.9 g/cm ³ Bronze (Cu-Sn) acc. to EN: CuSn4 (CW450K) 0.38 J/(g·K) 30 mm ² /s 100 W/(m·K) - J/g 950 - 1070 °C 18e-6 1/K	8.8 g/cm ³ Bronze (Cu-Sn) acc. to EN: CuSn6 (CW452K) 0.38 J/(g·K) 22 mm ² /s 75 W/(m·K) - J/g 900 - 1050 °C 19e-6 1/K	8.8 g/cm ³ Bronze (Cu-Sn) acc. to EN: CuSn8 (CW453K) 0.38 J/(g·K) 20 mm ² /s 67 W/(m·K) 54 J/g 860 - 1040 °C 19e-6 1/K	8.7 g/cm ³ Nickel Silver (Cu-Ni) acc. to EN: Cu-Ni12Zn24 (CW403J) 0.38 J/(g·K) 13 mm ² /s 42 W/(m·K) - J/g - °C 18e-6 1/K	8.7 g/cm ³ Nickel Silver (Cu-Ni) acc. to EN: Cu-Ni18Zn27 (CW410J) 0.38 J/(g·K) 10 mm ² /s 32 W/(m·K) - J/g - °C 18e-6 1/K	7.6 g/cm ³ Cu-Al CuAl10 Ni5Fe4 0.41 J/(g·K) 11 mm ² /s 33 W/(m·K) 164 J/g 1045 - 1081 °C 17e-6 1/K	1.8 - 1.9 g/cm ³ Mg - X Mg Alloy 0.93 - 1.06 J/(g·K) 17 - 62 mm ² /s 35 - 113 W/(m·K) 270 - 368 J/g 500 - 650 °C 18e-6 1/K	1.8 g/cm ³ Mg-Y-Rare Earth Electron WE43 0.97 J/(g·K) 27 mm ² /s 51 W/(m·K) - J/g 540 - 640 °C 27e-6 1/K	1.8 g/cm ³ Mg-Al-Zn G-MgAl9Zn1 (AZ91) 1.0 J/(g·K) 46 mm ² /s 84 W/(m·K) 272 J/g 559 °C 27e-6 1/K	1.8 g/cm ³ Mg-Zn ZM2 (3.5-5%Zn) 0.93 J/(g·K) 60 mm ² /s 104 W/(m·K) 305 J/g 601-639 °C 19e-6 1/K	1.8 g/cm ³ Mg-Ag-Rare Earth-Zr G-MgAg3 SE2Zr1 (MSR-B) 1.0 J/(g·K) 62 mm ² /s 113 W/(m·K) - J/g 550 °C 27e-6 1/K	7.6 - 9.0 g/cm ³ Ni - X Ni Alloy 0.41 - 0.52 J/(g·K) 2.3 - 5.8 mm ² /s 9 - 22 W/(m·K) - J/g 1250 - 1455 °C 13 to 14e-6 1/K	8.2 g/cm ³ Ni - Cr NiCr19 NbMo (2.4668, Inconel 718) 0.44 J/(g·K) 3.2 mm ² /s 11 W/(m·K) 227 J/g 1260 - 1336 °C 13e-6 1/K (20-100°C)	8.3 g/cm ³ Ni-Cr NiCr15Fe (2.4816, Inconel 600) 0.44 J/(g·K) 3.5 mm ² /s 13 W/(m·K) - J/g 1354 - 1413 °C 13e-6 1/K (20-100°C)	8.8 g/cm ³ Ni-Cu Ni-Cu (2.4360, Monel 400) 0.43 J/(g·K) 5.8 mm ² /s 22 W/(m·K) 309 J/g 1300 - 1350 °C 14e-6 1/K (20-100°C)	4.4 g/cm ³ Ti-Al Ti6Al4V (3.7164, a, b - TiAl) 0.58 J/(g·K) 2.6 mm ² /s 6.6 W/(m·K) - J/g 1604 - 1660 °C 9.2e-6 1/K (20-100°C)	3.9 g/cm ³ Ti-Al Ti48 Al2Nb0.75 Cr0.35i (γ - TiAl) 0.65 J/(g·K) 7.7 mm ² /s 20 W/(m·K) 457 J/g 1462 °C 10e-6 1/K	4.9 g/cm ³ Ti-Mo Ti15 Mo3Nb3 Al0.25i 0.49 J/(g·K) 3.1 mm ² /s 7.6 W/(m·K) - J/g - °C 4.9e-6 1/K	4.2 g/cm ³ Ti-V Ti15 V3Cr35n3Al 0.50 J/(g·K) 3.9 mm ² /s 8.1 W/(m·K) - J/g 1524 °C 9.7e-6 1/K	14.8 g/cm ³ Mo-W MW50 0.20 J/(g·K) 34 mm ² /s 88 W/(m·K) - J/g - °C - 1/K
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Leading Thermal Analysis ■

Iron Alloys (Low alloyed Steels ... Iron Cast Alloys)
Aluminum Alloys (Al-Si ... Al-Mg)
Gold Alloys (Au-Ag ... Au-Ni)
Copper Alloys (Brass (Cu-Zn) ...)
Magnesium Alloys (Mg-X ... Mg-Al-Rare Earth-Zr)
Nickel Alloys (Ni-X ... Ni-Cu)
Titanium Alloys (Ti-Al ... Ti-V)
Molybdenum-Tungsten-Alloy (Mo-W)

Density	Alloy	Melting Enthalpy
Specific Heat Capacity		Name
Thermal Diffusivity	Thermal Conductivity	Coefficient of Thermal Expansion