# MATERIAL SYMBOL CHART BY STANDARD



| Description | U.S.A. | | Japan | Germany | ISO |
|---|---|---|---|---|---|
| | ASTM | AISI | JIS | DIN | |
| **General structural Steel** | | | SM490A | | |
| | | | SM490B | | |
| | C | | SM570 | | |
| | | | SS400 | | |
| | A | | SS330 | St33 | |
| | B | | | | |
| | C | | | | |
| | 30 | | | | |
| | 33 | | | | |
| | 36 | | | | |
| | 40 | | | | |
| | 70 | | SS490 | St52-3 | |
| | C | | SS540 | | |
| | D | | SM490A | | |
| | E | | SM490B | | |
| | A | | SM490C | | |
| | B | | SM490Y | | |
| | 50W | | SM520 | | |
| | A | | SV330 | Ust36 | |
| | B | | SV400 | | |
| **Carbon Steel** | | 1015 | S15C | CK15 | C15E4 |
| | | | | C15 | |
| | | 1025 | S25C | CK25 | C25 |
| | | | | C25 | C25E4 |
| | | 1045 | S45C | CK45 | C45 |
| | | 1046 | | C45 | C45E4 |
| | | 1050 | S50C | CK50 | C50 |
| | | | | C50 | C50E4 |
| | 60 | | SB410 | HII | P7 |
| | 65 | | SB450 | 17Mn4 | P11 |
| | A | | SB450M | | P28 |
| | 70 | | SB480 | | |
| | B | | SB480M | | |
| **Alloy Steel** | | | SCM415 | | |
| | | | SCM415H | | |
| | | | SCM415TK | | |
| | | | SCM418 | | 18CrMo4 |
| | | | SCM418H | | 18CrMo4 |
| | | | SCM418TK | | |
| | | | SCM420 | | |
| | | | SCM420H | | |
| | | | SCM420TK | | |
| | | | SCM421 | | |
| | | 4130 | SCM430 | | |
| | | | SCM430TK | | |
| | | | SCM432 | | |
| | | 4135 | SCM435 | 34CrMo4 | 34CrMo4 |
| | | 4137 | | | |
| | | 4135H | SCM435H | 34CrMo4 | 34CrMo4 |
| | | 4137H | | | |
| | | | SCM435TK | | |
| | | 4140 | | 42CrMo4 | |
| | | 4142 | | | |
| | | 4140H | SCM440H | 42CrMo4 | 42CrMo4 |
| | | 4142H | | | |
| | | | SCM440TK | | |
| | | 4145 | SCM445 | | |
| | | 4147 | | | |
| | | 4145H | SCM445H | | |
| | | 4147H | SCM822 | | |
| | | | SCM822H | | |
| | | | SCr415 | | 16MnCr5 |
| | | | SCr415H | | 16MnCr5 |
| | | | SCr420 | | 16MnCr5 |
| | | | SCr420H | | 16MnCr5 |
| | | | SCr420TK | | |
| | | 5130 | SCr430 | 34Cr4 | 34Cr4 |
| | | 5132 | | | |
| | | 5130H | SCr430H | 34Cr4 | 34Cr4 |
| | | 5132H | | | |
| | | 5135 | SCr435 | 34Cr4 | 34Cr4 |
| | | | | 37Cr4 | 37Cr4 |
| | | 5135H | SCr435H | 34Cr4 | 34Cr4 |
| | | | | 37Cr4 | 37Cr4 |
| | | 5140 | SCr440 | 37Cr4 | 37Cr4 |
| | | | | 41Cr4 | 41Cr4 |
| | | 5140H | SCr440H | 37Cr4 | 37Cr4 |
| | | | | 41Cr4 | 41Cr4 |
| | | 5147 | SCr445 | | |
| | | 1522 | SMn420 | | 22Mn6 |
| | | 1522H | SMn420H | | 22Mn6 |
| | | | SMn433 | | |
| | | 1541H | SMn433H | | 36Mn6 |
| | | 1541 | SMn438 | | 36Mn6 |
| | | 1541H | SMn438H | | 36Mn6 |

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|---|---|---|---|---|---|
| | ASTM | AISI | JIS | DIN | |
| **Alloy Steel** | | | SMn443 | | |
| | | 1541H | SMn443H | | 42Mn6 |
| | | | SNC326 | | |
| | | | SNC415 | | |
| | | | SNC415H | | |
| | | | SNC631 | | |
| | | | SNC631H | | |
| | | | SNC815 | | |
| | | | SNC815H | | 15NiCr13 |
| | | | SNC836 | | |
| | | 8615 | SNCM220 | | 20NiCrMo2 |
| | | 8617 | | | |
| | | 8620 | | | |
| | | 8622 | | | |
| | | 8617H | SNCM220H | | 20NiCrMo2 |
| | | 8620H | | | |
| | | 8622H | | | |
| | | 8637 | SNCM240 | | 41CrNiMo2 |
| | | 8640 | | | |
| | | | SNCM415 | | |
| | | 4320 | SNCM420 | | |
| | | 4320H | SNCM420H | | |
| | | | SNCM431 | | |
| | | 4340 | SNCM439 | | |
| | | | SNCM447 | | |
| | | | SNCM616 | | |
| | | | SNCM625 | | |
| | | | SNCM630 | | |
| | | | SNCM815 | | |
| **Carbon Tool Steel** | | | SK1 | | TC140 |
| | W1-111/2 | | SK2 | | TC120 |
| | W1-10 | | SK3 | C105W1 | TC105 |
| | W1-9 | | SK4 | | TC90 |
| | W1-8 | | SK5 | C80W1 | TC90 |
| | | | SK6 | C80W1 | TC80 |
| | | | | | TC70 |
| | | | SK7 | C70W2 | |
| | | | SKS2 | 105WCr6 | 105WCr1 |
| | | | SKS3 | | |
| | | | SKS4 | | |
| | | | SKS5 | | |
| | | | SKS6 | | |
| | | | SKS7 | | |
| | | | SKS8 | | |
| | F2 | | SKS11 | | |
| | | | SKS21 | | |
| | | | SKS31 | 105WCr6 | 105WCr1 |
| | | | SKS41 | | |
| | W2-91/2 | | SKS43 | | TCV105 |
| | W2-81/2 | | SKS44 | | |
| | L6 | | SKS51 | | |
| | | | SKS93 | | |
| | | | SKS94 | | |
| | | | SKS95 | | |
| | 52100 | | SUJ2 | 100Cr6 | 1 |
| **Die Steel** | D2 | | SKD11 | | |
| | H13 | | SKD61 | X40CrMoV51 | 40CrMoV5 |
| **Tool Steel** | | | SKT3 | | |
| | | | SKT4 | 55NiCrMoV6 | 55NiCrMoV2 |
| **Pipe Steel** | | | STAM290GB | St28 | |
| | TypeF | | SGP | St33 | |
| | 1008 | | STKM11A | St34-2 | |
| | A | | STPT370 | St35.8 | |
| | | | STB340 | St35.8 | |
| | | | | St37.8 | |
| | E-A | | STPG370 | St37.0 | |
| | A | | | | |
| | | | STS370 | St37.4 | |
| | B | | STPT410 | St42.8 | |
| | C | | STB410 | St42.8 | |
| | A-1 | | | St45.8 | |
| | E-B | | STPG410 | St44.0 | |
| | B | | | St44.0 | |
| | | | STK400 | St44-2 | TS9 |
| | | | STKM12B | St44-2 | |
| | | | STKR400 | St44-2 | |
| | | | STAM390G | St44-2 | |
| | | | STS410 | St44.4 | |
| | | | STKM14A | St45 | |
| | 1020 | | STKM13C | St45 | |
| | | | STKM18C | St52 | |
| | | | STKM19A | St52 | |
| | | | STKM19C | St52 | |
| | | | STK490 | St52-3 | TS18 |
| | | | STKR490 | St52-3 | |

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| Description | U.S.A. | | Japan | Germany | ISO |
|---|---|---|---|---|---|
| | ASTM | AISI | JIS | DIN | |
| **Pipe Steel** | | | STS480 | St52.4 | |
| | | | STKM12A | | R33 |
| | | | STKM12C | | |
| | | | STKM13B | | |
| | 1026 | | STKM14B | | |
| | 1025 | | | | |
| | 1026 | | STKM14C | | |
| | | | STKM15A | | |
| | | | STKM15C | | |
| | | | STKM16A | | |
| | | | STKM16C | | |
| | 1050 | | STKM17A | | |
| | | | STKM17C | | |
| | | | STKM18A | | |
| | | | STKM18B | | R50 |
| | | | STKM20A | | |
| **Heat Resistant steel** | S65007 | | SUH1 | | |
| | | | SUH3 | | |
| | | | SUH4 | | |
| | | | SUH11 | | |
| | | | SUH21 | | |
| | | | SUH31 | | |
| | | | SUH35 | | |
| | S63008 | | SUH36 | | |
| | S63017 | | SUH37 | | |
| | | | SUH38 | | |
| | S30900 | | SUH309 | | |
| | S31000 | | SUH310 | | |
| | N08330 | | SUH330 | | |
| | S40900 | | SUH409 | X6CrTi12 | 1Ti |
| | | | SUH409L | | |
| | S44600 | | SUH446 | | H7 |
| | | | SUH600 | | |
| | S42200 | | SUH616 | | |
| | S66286 | | SUH660 | | |
| | R30155 | | SUH661 | | |
| **Free cutting steel** | | 1110 | SUM11 | | |
| | | 1108 | SUM12 | | |
| | | 1212 | SUM21 | | 9S20 |
| | | 1213 | SUM22 | 9SMn28 | 11SMn28 |
| | | | SUM22L | 9SMnPb28 | 11SMnPb |
| | | 1215 | SUM23 | | |
| | | | SUM23L | | |
| | | 12L14 | SUM24L | 9SMnPb28 | 11SMnPb28 |
| | | | SUM25 | 9SMn36 | 12SMn35 |
| | | 1117 | SUM31 | 15S10 | |
| | | | SUM31L | | |
| | | | SUM32 | | |
| | | 1137 | SUM41 | | |
| | | 1141 | SUM42 | | |
| | | 1144 | SUM43 | | 44SMn28 |
| **Spring steel** | | 1075 | SUP3 | | |
| | | 1078 | | | |
| | | | SUP6 | | 1 |
| | | 9260 | SUP7 | | 1 |
| | | 5155 | SUP9 | 55Cr3 | 5 |
| | | 5160 | SUP9A | | |
| | | 6150 | SUP10 | 50CrV4 | 9 |
| | | 51B60 | SUP11A | | 7 |
| | | | SUP12 | 54SiCr6 | 4 |
| | | 4161 | SUP13 | | 8 |
| **Stainless steel** | S30400 | | SUS304 | X5CrNi1810 | 11 |
| | S40500 | | SUS405 | X6CrAl13 | 2 |
| | S42020 | | SUS420F | | |
| | S43000 | | SUS430 | X6Cr17 | 8 |
| | S44002 | | SUS440A | | |
| | S17400 | | SUS630 | | 1 |
| | S17700 | | SUS631 | X7CrNiAl177 | 2 |
| | S41000 | | SUS410 | X10Cr13 | 3 |
| **Cast steel** | HT | | SCH15 | | |
| **Cast Iron** | 40 | | FC250 | | |
| | 45 | | FC300 | | |
| **Ductile Cast Iron** | 60-40-18 | | FCD400 | | |
| | 80-55-06 | | FCD600 | GGG-60 | |
| **Aluminum Alloy** | | | A1080 | Al99.8 | |
| | | | A1070 | Al99.7 | |
| | | | A1050 | Al99.5 | Al99.5 |
| | 1100 | | A1100 | | Al99.0Cu |
| | | | A1200 | Al99 | Al99.0 |
| | 2014 | | A2014 | AlCuSiMn | Al-Cu4SiMg |
| | | | A2017 | AlCuMg1 | Al-Cu4MgSi |
| | 2014 | | A2017 | AlCuSiMn | Al-Cu4SiMg |
| | 2024 | | A2024BD | AlCuMg2 | AlCu4Mg1 |
| | 2024 | | A2024BE | AlCuMg2 | AlCu4Mg1 |
| | 2024 | | A2024 P | EN AW-2024 | AlCu4Mg1 |

| Description | U.S.A. | | Japan | Germany | ISO |
|---|---|---|---|---|---|
| | ASTM | AISI | JIS | DIN | |
| **Aluminum Alloy** | 2024 | | A2024 S | AlCuMg2 | AlCu4Mg1 |
| | 2024 | | A2024 TD | AlCuMg2 | |
| | 2024 | | A2024 TE | AlCuMg2 | AlCu4Mg1 |
| | 2024 | | A2024 W | AlCuMg2 | AlCu4Mg1 |
| | 3003 | | A3003 | | |
| | 5052 | | A5052 BD | AlMg2.5 | AlMg2.5 |
| | 5052 | | A5052 BE | | |
| | | | A5052 FH | | |
| | 5052 | | A5052 P | EN AW-5052 | AlMg2.5 |
| | 5052 | | A5052 S | | |
| | 5052 | | A5052 TD | | AlMg2.5 |
| | 5052 | | A5052 TE | | |
| | 5052 | | A5052 W | AlMg2.5 | AlMg2.5 |
| | | | A5056 | AlMg5 | |
| | 5083 | | A5083 | AlMg4.5Mn | Al-Mg4.5Mn0.7 |
| | 6061 | | A6061 | | Al-Mg1SiCu |
| | 6063 | | A6063 | | Al-Mg0.7Si |
| | 7075 | | A7075 BD | AlZnMgCu1.5 | AlZn5.5MgCu |
| | 7075 | | A7075 BE | AlZnMgCu1.5 | AlZn5.5MgCu |
| | 7075 | | A7075 FD | AlZnMgCu1.5 | |
| | 7075 | | A7075 FH | AlZnMgCu1.5 | |
| | 7075 | | A7075 P | EN AW-7075 | AlZn5.5MgCu |
| | 7075 | | A7075 S | AlZnMgCu1.5 | AlZn5.5MgCu |
| | 7075 | | A7075 TD | AlZnMgCu1.5 | AlZn5.5MgCu |
| | 7075 | | A7075 TE | AlZnMgCu1.5 | AlZn5.5MgCu |
| **Aluminum Alloy Casting** | 295.0 | | AC1A | G(GK)-AlCu4Ti | |
| | 204.0 | | AC1B | G(GK)-AlCu4TiMg | Al-Cu4MgTi |
| | | | AC2A | | Al-Si5Cu3 |
| | 319.0 | | AC2B | | Al-Si6Cu4 |
| | | | AC3A | G(GK)AlSi2 | Al-Sil2 |
| | | | AC4A | G(GK)-AlSi10Mg | Al-Si10Mg |
| | 333.0 | | AC4B | G(GK)-AlSiCu3 | |
| | 356.0 | | AC4C | | Al-Si7Mg |
| | A356.0 | | AC4CH | G(GK)AlSi7Mg | Al-Si7Mg |
| | 355.0 | | AC4D | | Al-Si5Cu1Mg |
| | 242.0 | | AC5A | | Al-Cu4Ni2Mg2 |
| | 514.0 | | AC7A | G(GK)-AlMg5 | |
| | 520.0 | | AC7B | | Al-Mg10 |
| | 336.0 | | AC8A | | |
| | | | AC8B | | |
| | 332.0 | | AC8C | | |
| | | | AC9A | | |
| | | | AC9B | | |
| | A413.0 | | ADC1 | GD-AlSi12(Cu) | Al-Sil2CuFe |
| | A360.0 | | ADC3 | GD-AlSi10Mg | |
| | 518.0 | | ADC5 | GD-AlMg9 | |
| | | | ADC6 | | |
| | A380.0 | | ADC10 | GD-AlSi9Cu3 | Al-Si8Cu3Fe |
| | A380.0 | | ADC10Z | GD-AlSi9Cu3 | Al-Si9Cu3Fe |
| | 383.0 | | ADC12 | | |
| | 383.0 | | ADC12Z | | |
| | A390.0 | | ADC14 | | |
| **Magnesium Alloy** | AZ91A | | MD1A | DG-MgAl9Zn1 | |
| | AZ91B | | MD1B | DG-MgAl9Zn1 | |
| | AZ91D | | MD1D | | |
| | AZ60A | | | | |
| | AZ60B | | | | |
| | AZ41A | | | | |
| | AZ80A | | MB3 | MgAl8Zn | Mg-Al8Zn |
| | AM20A | | | | |
| | AM50A | | | | |
| | AM60B | | MD2B | | |
| | AS22A | | | | |
| | AS41B | | | | |
| | AE42A | | | | |
| **Copper, Copper Casting** | C10200(B187:94) | | C1020 B | OF-Cu | Cu-OF |
| | C10200(B152:94) | | C1020 P | OF-Cu | Cu-OF |
| | C10200(B152:94) | | C1020 R | OF-Cu | Cu-OF |
| **Brass, Brass Casting** | C26000(B36:95) | | C2600 B | CuZn30 17660:83 | 426/I:83 CuZn30 |
| | C26000(B36:95) | | C2600 P | CuZn30 17660:83 | 426/I:83 CuZn30 |
| | C26000(B36:95) | | C2600 R | CuZn30 17660:83 CuZn30 17670:83 | 426/I:83 CuZn30 |
| | C26000(B135:95) | | C2600 T | CuZn30 | CuZn30 |
| | C26000(B134:93) | | C2600 W | CuZn30 | CuZn30 |
| **Bronze, Bronze Casting** | C61400(B169:95) | | C6140 P | | 428:83 CuAl 8Fe3 |

## Approximate relationship between various hardness scales

| (HRC) Rockwell hardness C scale 150kg Brale | (HV) Diamond Pyramid hardness number, Vickers | (HB) Brinell hardness 29.42kN | | | Rockwell hardness | | | Rockwell hardness | | | (Hs) Shore scleroscope hardness number | Approx. tensile strength N/mm² | (HRC) Rockwell hardness C scale 150kg Brale |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Standard 10mm ball | Hultgren 10mm ball | Tungsten carbide 10mm | (HRA) A scale 588.4N (60kg) Brale | (HRB) B scale 980.7N (100kg) 1/16" in Ball | (HRD) D scale 980.7N (100kg) Brale | 15N Superficial Load 147.1N | 30N Superficial Load 294.2N | 45N Superficial Load 441.3N | | | |
| 68 | 940 | — | — | — | 85.6 | — | 76.9 | 93.2 | 84.4 | 75.4 | 97 | — | 68 |
| 67 | 900 | — | — | — | 85.0 | — | 76.1 | 92.9 | 83.6 | 74.2 | 95 | — | 67 |
| 66 | 865 | — | — | — | 84.5 | — | 75.4 | 92.5 | 82.8 | 73.3 | 92 | — | 66 |
| 65 | 832 | — | — | 739 | 83.9 | — | 74.5 | 92.2 | 81.9 | 72.0 | 91 | — | 65 |
| 64 | 800 | — | — | 722 | 83.4 | — | 73.8 | 91.8 | 81.1 | 71.0 | 88 | — | 64 |
| 63 | 772 | — | — | 705 | 82.8 | — | 73.0 | 91.4 | 80.1 | 69.9 | 87 | — | 63 |
| 62 | 746 | — | — | 688 | 82.3 | — | 72.2 | 91.1 | 79.3 | 68.8 | 85 | — | 62 |
| 61 | 720 | — | — | 670 | 81.8 | — | 71.5 | 90.7 | 78.4 | 67.7 | 83 | — | 61 |
| 60 | 697 | — | 613 | 654 | 81.2 | — | 70.7 | 90.2 | 77.5 | 66.6 | 81 | — | 60 |
| 59 | 674 | — | 599 | 634 | 80.7 | — | 69.9 | 89.8 | 76.6 | 65.5 | 80 | — | 59 |
| 58 | 653 | — | 587 | 615 | 80.1 | — | 69.2 | 89.3 | 75.7 | 64.3 | 78 | — | 58 |
| 57 | 633 | — | 575 | 595 | 79.6 | — | 68.5 | 88.9 | 74.8 | 63.2 | 76 | — | 57 |
| 56 | 613 | — | 561 | 577 | 79.0 | — | 67.7 | 88.3 | 73.9 | 62.0 | 75 | — | 56 |
| 55 | 595 | — | 546 | 560 | 78.5 | — | 66.9 | 87.9 | 73.0 | 60.9 | 74 | 2079 | 55 |
| 54 | 577 | — | 534 | 543 | 78.0 | — | 66.1 | 87.4 | 72.0 | 59.8 | 72 | 2010 | 54 |
| 53 | 560 | — | 519 | 525 | 77.4 | — | 65.4 | 86.9 | 71.2 | 58.6 | 71 | 1952 | 53 |
| 52 | 544 | 500 | 508 | 512 | 76.8 | — | 64.6 | 86.4 | 70.2 | 57.4 | 69 | 1883 | 52 |
| 51 | 528 | 487 | 494 | 496 | 76.3 | — | 63.8 | 85.9 | 69.4 | 56.1 | 68 | 1824 | 51 |
| 50 | 513 | 475 | 481 | 481 | 75.9 | — | 63.1 | 85.5 | 68.5 | 55.0 | 67 | 1755 | 50 |
| 49 | 498 | 464 | 469 | 469 | 75.2 | — | 62.1 | 85.0 | 67.6 | 53.8 | 66 | 1687 | 49 |
| 48 | 484 | 451 | 455 | 455 | 74.7 | — | 61.4 | 84.5 | 66.7 | 52.5 | 64 | 1638 | 48 |
| 47 | 471 | 442 | 443 | 443 | 74.1 | — | 60.8 | 83.9 | 65.8 | 51.4 | 63 | 1579 | 47 |
| 46 | 458 | 432 | 432 | 432 | 73.6 | — | 60.0 | 83.5 | 64.8 | 50.3 | 62 | 1530 | 46 |
| 45 | 446 | 421 | 421 | 421 | 73.1 | — | 59.2 | 83.0 | 64.0 | 49.0 | 60 | 1481 | 45 |
| 44 | 434 | 409 | 409 | 409 | 72.5 | — | 58.5 | 82.5 | 63.1 | 47.8 | 58 | 1432 | 44 |
| 43 | 423 | 400 | 400 | 400 | 72.0 | — | 57.7 | 82.0 | 62.2 | 46.7 | 57 | 1383 | 43 |
| 42 | 412 | 390 | 390 | 390 | 71.5 | — | 56.9 | 81.5 | 61.3 | 45.5 | 56 | 1334 | 42 |
| 41 | 402 | 381 | 381 | 381 | 70.9 | — | 56.2 | 80.9 | 60.4 | 44.3 | 55 | 1294 | 41 |
| 40 | 392 | 371 | 371 | 371 | 70.4 | — | 55.4 | 80.4 | 59.5 | 43.1 | 54 | 1245 | 40 |
| 39 | 382 | 362 | 362 | 362 | 69.9 | — | 54.6 | 79.9 | 58.6 | 41.9 | 52 | 1216 | 39 |
| 38 | 372 | 353 | 353 | 353 | 69.4 | — | 53.8 | 79.4 | 57.7 | 40.8 | 51 | 1177 | 38 |
| 37 | 363 | 344 | 344 | 344 | 68.9 | — | 53.1 | 78.8 | 56.8 | 39.6 | 50 | 1157 | 37 |
| 36 | 354 | 336 | 336 | 336 | 68.4 | (109.0) | 52.3 | 78.3 | 55.9 | 38.4 | 49 | 1118 | 36 |
| 35 | 345 | 327 | 327 | 327 | 67.9 | (108.5) | 51.5 | 77.7 | 55.0 | 37.2 | 48 | 1079 | 35 |
| 34 | 336 | 319 | 319 | 319 | 67.4 | (108.0) | 50.8 | 77.2 | 54.2 | 36.1 | 47 | 1059 | 34 |
| 33 | 327 | 311 | 311 | 311 | 66.8 | (107.5) | 50.0 | 76.6 | 53.3 | 34.9 | 46 | 1030 | 33 |
| 32 | 318 | 301 | 301 | 301 | 66.3 | (107.0) | 49.2 | 76.1 | 52.1 | 33.7 | 44 | 1000 | 32 |
| 31 | 310 | 294 | 294 | 294 | 65.8 | (106.0) | 48.4 | 75.6 | 51.3 | 32.5 | 43 | 981 | 31 |
| 30 | 302 | 286 | 286 | 286 | 65.3 | (105.5) | 47.7 | 75.0 | 50.4 | 31.3 | 42 | 951 | 30 |
| 29 | 294 | 279 | 279 | 279 | 64.7 | (104.5) | 47.0 | 74.5 | 49.5 | 30.1 | 41 | 932 | 29 |
| 28 | 286 | 271 | 271 | 271 | 64.3 | (104.0) | 46.1 | 73.9 | 48.6 | 28.9 | 41 | 912 | 28 |
| 27 | 279 | 264 | 264 | 264 | 63.8 | (103.0) | 45.2 | 73.3 | 47.7 | 27.8 | 40 | 883 | 27 |
| 26 | 272 | 258 | 258 | 258 | 63.3 | (102.5) | 44.6 | 72.8 | 46.8 | 26.7 | 38 | 863 | 26 |
| 25 | 266 | 253 | 253 | 253 | 62.8 | (101.5) | 43.8 | 72.2 | 45.9 | 25.5 | 38 | 843 | 25 |
| 24 | 260 | 247 | 247 | 247 | 62.4 | (101.0) | 43.1 | 71.6 | 45.0 | 24.3 | 37 | 824 | 24 |
| 23 | 254 | 243 | 243 | 243 | 62.0 | 100.0 | 42.1 | 71.0 | 44.0 | 23.1 | 36 | 804 | 23 |
| 22 | 248 | 237 | 237 | 237 | 61.5 | 99.0 | 41.6 | 70.5 | 43.2 | 22.0 | 35 | 785 | 22 |
| 21 | 243 | 231 | 231 | 231 | 61.0 | 98.5 | 40.9 | 69.9 | 42.3 | 20.7 | 35 | 775 | 21 |
| 20 | 238 | 226 | 226 | 226 | 60.5 | 97.8 | 40.1 | 69.4 | 41.5 | 19.6 | 34 | 755 | 20 |
| (18) | 230 | 219 | 219 | 219 | — | 96.7 | — | — | — | — | 33 | 736 | (18) |
| (16) | 222 | 212 | 212 | 212 | — | 95.5 | — | — | — | — | 32 | 706 | (16) |
| (14) | 213 | 203 | 203 | 203 | — | 93.9 | — | — | — | — | 31 | 677 | (14) |
| (12) | 204 | 194 | 194 | 194 | — | 92.3 | — | — | — | — | 29 | 647 | (12) |
| (10) | 196 | 187 | 187 | 187 | — | 90.7 | — | — | — | — | 28 | 618 | (10) |
| ( 8) | 188 | 179 | 179 | 179 | — | 89.5 | — | — | — | — | 27 | 598 | ( 8) |
| ( 6) | 180 | 171 | 171 | 171 | — | 87.1 | — | — | — | — | 26 | 579 | ( 6) |
| ( 4) | 173 | 165 | 165 | 165 | — | 85.5 | — | — | — | — | 25 | 549 | ( 4) |
| ( 2) | 166 | 158 | 158 | 158 | — | 83.5 | — | — | — | — | 24 | 530 | ( 2) |
| ( 0) | 160 | 152 | 152 | 152 | — | 81.7 | — | — | — | — | 24 | 520 | ( 0) |

In the above chart, figures with ( ) are not commonly used.

# METRIC CONVERSION TABLE

| Decimal | Fraction | Wire | mm. | Tap Sizes To be used with drills as indicated |
|---|---|---|---|---|
| .0059 | | 97 | .15 | |
| .0063 | | 96 | .16 | |
| .0067 | | 95 | .17 | |
| .0071 | | 94 | .18 | |
| .0075 | | 93 | .19 | |
| .0079 | | 92 | .2 | |
| .0083 | | 91 | | |
| .0087 | | 90 | .22 | |
| .0091 | | 89 | | |
| .0095 | | 88 | | |
| .0098 | | | .25 | |
| .0100 | | 87 | | |
| .0105 | | 86 | | |
| .0110 | | 85 | .28 | |
| .0115 | | 84 | | |
| .0118 | | | .3 | |
| .0120 | | 83 | | |
| .0125 | | 82 | | |
| .0126 | | | .32 | |
| .0130 | | 81 | | |
| .0135 | | 80 | | |
| .0138 | | | .35 | |
| .0145 | | 79 | | |
| .0150 | | | .38 | |
| .0156 | 1/64 | | | |
| .0157 | | | .4 | |
| .0160 | | 78 | | |
| .0177 | | | .45 | |
| .0180 | | 77 | | |
| .0197 | | | .5 | |
| .0200 | | 76 | | |
| .0210 | | 75 | | |
| .0217 | | | .55 | |
| .0225 | | 74 | | |
| .0236 | | | .6 | |
| .0240 | | 73 | | |
| .0250 | | 72 | | |
| .0256 | | | .65 | |
| .0260 | | 71 | | |
| .0276 | | | .7 | |
| .0280 | | 70 | | |
| .0292 | | 69 | | |
| .0295 | | | .75 | M1×0.25 |
| .0310 | | 68 | | |
| .0312 | 1/32 | | | |
| .0315 | | | .8 | |
| .0320 | | 67 | | |
| .0330 | | 66 | | |
| .0335 | | | .85 | M1.1×0.25 |
| .0350 | | 65 | | |
| .0354 | | | .9 | |
| .0360 | | 64 | | |
| .0370 | | 63 | | |
| .0374 | | | .95 | M1.2×0.25 |
| .0380 | | 62 | | |
| .0390 | | 61 | | |
| .0394 | | | 1. | |
| .0400 | | 60 | | |
| .0410 | | 59 | | |
| .0413 | | | 1.05 | |
| .0420 | | 58 | | |
| .0430 | | 57 | | |
| .0433 | | | 1.1 | M1.4×0.3 |
| .0453 | | | 1.15 | |
| .0465 | | 56 | | |
| .0469 | 3/64 | | | No.0-80 |
| .0472 | | | 1.2 | |
| .0492 | | | 1.25 | M1.6×0.35 |
| .0512 | | | 1.3 | |
| .0520 | | 55 | | |
| .0531 | | | 1.35 | |
| .0550 | | 54 | | |
| .0551 | | | 1.4 | |
| .0571 | | | 1.45 | M1.8×0.35 |
| .0591 | | | 1.5 | |
| .0595 | | 53 | | No.1-64 No.1-72 |
| .0610 | | | 1.55 | |
| .0625 | 1/16 | | | |
| .0630 | | | 1.6 | M2×0.4 |
| .0635 | | 52 | | |
| .0650 | | | 1.65 | |
| .0669 | | | 1.7 | |
| .0670 | | 51 | | |
| .0689 | | | 1.75 | M2.2×0.45 |
| .0700 | | 50 | | No.2-56 No.2-64 |
| .0709 | | | 1.8 | |
| .0728 | | | 1.85 | |
| .0730 | | 49 | | |
| .0748 | | | 1.9 | |
| .0760 | | 48 | | |
| .0768 | | | 1.95 | |
| .0781 | 5/64 | | | |
| .0785 | | 47 | | No.3-48 |
| .0787 | | | 2. | |
| .0807 | | | 2.05 | M2.5×0.45 |
| .0810 | | 46 | | |
| .0820 | | 45 | | No.3-56 |
| .0827 | | | 2.1 | |
| .0846 | | | 2.15 | |
| .0860 | | 44 | | |
| .0866 | | | 2.2 | |
| .0886 | | | 2.25 | |
| .0890 | | 43 | | No.4-40 |
| .0906 | | | 2.3 | |
| .0925 | | | 2.35 | |
| .0935 | | 42 | | No.4-48 |
| .0938 | 3/32 | | | |
| .0945 | | | 2.4 | |
| .0960 | | 41 | | |
| .0965 | | | 2.45 | |
| .0980 | | 40 | | |
| .0984 | | | 2.5 | M3×0.5 |
| .0995 | | 39 | | |
| .1015 | | 38 | | No.5-40 |
| .1024 | | | 2.6 | |
| .1040 | | 37 | | No.5-44 |
| .1063 | | | 2.7 | |
| .1065 | | 36 | | No.6-32 |
| .1094 | 7/64 | | | |
| .1100 | | 35 | | |
| .1102 | | | 2.8 | |
| .1110 | | 34 | | |
| .1130 | | 33 | | No.6-40 |
| .1142 | | | 2.9 | M3.5×0.6 |
| .1160 | | 32 | | |
| .1181 | | | 3. | |
| .1200 | | 31 | | |
| .1220 | | | 3.1 | |
| .1250 | 1/8 | | | |
| .1260 | | | 3.2 | |
| .1285 | | 30 | | |
| .1299 | | | 3.3 | M4×0.7 |
| .1339 | | | 3.4 | |
| .1360 | | 29 | | No.8-32 No.8-36 |
| .1378 | | | 3.5 | |
| .1405 | | 28 | | |
| .1406 | 9/64 | | | |
| .1417 | | | 3.6 | |
| .1440 | | 27 | | |
| .1457 | | | 3.7 | M4.5×C.75 |
| .1470 | | 26 | | |
| .1495 | | 25 | | No.10-24 |
| .1496 | | | 3.8 | |
| .1520 | | 24 | | |
| .1535 | | | 3.9 | |
| .1540 | | 23 | | |
| .1562 | 5/32 | | | |
| .1570 | | 22 | | |
| .1575 | | | 4. | |
| .1590 | | 21 | | No.10-32 |
| .1610 | | 20 | | |
| .1614 | | | 4.1 | |
| .1654 | | | 4.2 | M5×0.8 |
| .1660 | | 19 | | |
| .1693 | | | 4.3 | |
| .1695 | | 18 | | |
| .1719 | 11/64 | | | |
| .1730 | | 17 | | |
| .1732 | | | 4.4 | |
| .1770 | | 16 | | No.12-24 |
| .1772 | | | 4.5 | |
| .1800 | | 15 | | |
| .1811 | | | 4.6 | |
| .1820 | | 14 | | No.12-28 |
| .1850 | | 13 | 4.7 | No.12-32 |
| .1875 | 3/16 | | | |
| .1890 | | 12 | 4.8 | |
| .1910 | | 11 | | |
| .1929 | | | 4.9 | |
| .1935 | | 10 | | |
| .1960 | | 9 | | |
| .1969 | | | 5. | M6×1 |
| .1990 | | 8 | | |
| .2008 | | | 5.1 | |
| .2010 | | 7 | | 1/4-20 |
| .2031 | 13/64 | | | |
| .2040 | | 6 | | |
| .2047 | | | 5.2 | |
| .2055 | | 5 | | |
| .2087 | | | 5.3 | |
| .2090 | | 4 | | |
| .2126 | | | 5.4 | |
| .2130 | | 3 | | |
| .2165 | | | 5.5 | |
| .2188 | 7/32 | | | 1/4-28 1/4-32 |
| .2205 | | | 5.6 | |
| .2210 | | 2 | | |
| .2244 | | | 5.7 | |
| .2280 | | 1 | | |
| .2283 | | | 5.8 | |
| .2323 | | | 5.9 | |
| .2340 | | A | | |
| .2344 | 15/64 | | | |
| .2362 | | | 6. | M7×1 |
| .2380 | | B | | |
| .2402 | | | 6.1 | |
| .2420 | | C | | |
| .2441 | | | 6.2 | |
| .2460 | | D | | |
| .2480 | | | 6.3 | |
| .2500 | 1/4 | E | | |
| .2520 | | | 6.4 | |
| .2559 | | | 6.5 | |
| .2570 | | F | | 5/16-18 |
| .2598 | | | 6.6 | |
| .2610 | | G | | |
| .2638 | | | 6.7 | |
| .2656 | 17/64 | | | 5/16-20 |
| .2660 | | H | | |
| .2677 | | | 6.8 | M8×1.25 |
| .2717 | | | 6.9 | |
| .2720 | | I | | 5/16-24 |
| .2756 | | | 7. | |
| .2770 | | J | | 5/16-28 |
| .2795 | | | 7.1 | |
| .2810 | | K | | |
| .2812 | 9/32 | | | 5/16-32 |
| .2835 | | | 7.2 | |
| .2874 | | | 7.3 | |
| .2900 | | L | | |
| .2913 | | | 7.4 | |
| .2950 | | M | | |
| .2953 | | | 7.5 | |
| .2969 | 19/64 | | | |
| .2992 | | | 7.6 | |
| .3020 | | N | | |
| .3031 | | | 7.7 | |
| .3071 | | | 7.8 | M9×1.25 |
| .3110 | | | 7.9 | |
| .3125 | 5/16 | | | 3/8-16 |
| .3150 | | | 8. | |
| .3160 | | O | | |
| .3189 | | | 8.1 | |
| .3228 | | | 8.2 | |
| .3230 | | P | | |
| .3268 | | | 8.3 | |
| .3281 | 21/64 | | | 3/8-20 |
| .3307 | | | 8.4 | |
| .3320 | | Q | | |
| .3346 | | | 8.5 | M10×1.5 |
| .3386 | | | 8.6 | |
| .3390 | | R | | 3/8-24 |
| .3425 | | | 8.7 | |
| .3438 | 11/32 | | | 3/8-28 3/8-32 |
| .3465 | | | 8.8 | |
| .3480 | | S | | |
| .3504 | | | 8.9 | |
| .3543 | | | 9. | |
| .3580 | | T | | |
| .3583 | | | 9.1 | |
| .3594 | 23/64 | | | |
| .3622 | | | 9.2 | |
| .3661 | | | 9.3 | |
| .3680 | | U | | 7/16-14 |
| .3701 | | | 9.4 | |
| .3740 | | | 9.5 | |
| .3750 | 3/8 | | | 7/16-16 |
| .3770 | | V | | |
| .3780 | | | 9.6 | |
| .3819 | | | 9.7 | |
| .3858 | | | 9.8 | |
| .3860 | | W | | |
| .3898 | | | 9.9 | |
| .3906 | 25/64 | | | 7/16-20 |
| .3937 | | | 10. | |
| .3970 | | X | | |
| .4016 | | | 10.2 | M12×1.75 |
| .4040 | | Y | | 7/16-28 |
| .4062 | 13/32 | | | 7/16-32 |
| .4130 | | Z | | |
| .4134 | | | 10.5 | |
| .4219 | 27/64 | | | 1/2-13 |
| .4252 | | | 10.8 | |
| .4331 | | | 11. | |
| .4375 | 7/16 | | | 1/2-16 |
| .4409 | | | 11.2 | |
| .4528 | | | 11.5 | |
| .4531 | 29/64 | | | 1/2-20 |
| .4646 | | | 11.8 | |
| .4688 | 15/32 | | | 1/2-28 1/2-32 |
| .4724 | | | 12. | M14×2 |
| .4803 | | | 12.2 | |
| .4844 | 31/64 | | | 9/16-12 |
| .4921 | | | 12.5 | |
| .5000 | 1/2 | | | 9/16-16 |
| .5039 | | | 12.8 | |
| .5118 | | | 13. | |
| .5156 | 33/64 | | | 9/16-18 9/16-20 |
| .5197 | | | 13.2 | |
| .5312 | 17/32 | | | 9/16-24 9/16-28 9/16-32 5/8-11 |
| .5315 | | | 13.5 | |
| .5433 | | | 13.8 | |
| .5469 | 35/64 | | | 5/8-12 |
| .5512 | | | 14. | M16×2 |
| .5610 | | | 14.25 | |
| .5625 | 9/16 | | | 5/8-16 |
| .5709 | | | 14.5 | |
| .5781 | 37/64 | | | 5/8-18 5/8-20 |
| .5807 | | | 14.75 | |
| .5906 | | | 15. | |
| .5938 | 19/32 | | | 5/8-24 5/8-28 5/8-32 |
| .6004 | | | 15.25 | |
| .6094 | 39/64 | | | 11/16-12 |
| .6102 | | | 15.5 | M18×2.5 |
| .6201 | | | 15.75 | |
| .6250 | 5/8 | | | 11/16-16 |
| .6299 | | | 16. | |
| .6398 | | | 16.25 | |
| .6406 | 41/64 | | | 11/16-20 |
| .6496 | | | 16.5 | |
| .6562 | 21/32 | | | 11/16-24 11/16-28 11/16-32 3/4-10 |
| .6594 | | | 16.75 | |
| .6693 | | | 17. | |
| .6719 | 43/64 | | | 3/4-12 |
| .6791 | | | 17.25 | |
| .6875 | 11/16 | | | 3/4-16 |
| .6890 | | | 17.5 | M20×2.5 |
| .7031 | 45/64 | | | 3/4-20 |
| .7087 | | | 18. | |
| .7188 | 23/32 | | | 3/4-28 3/4-32 |
| .7283 | | | 18.5 | |
| .7344 | 47/64 | | | 13/16-12 |
| .7480 | | | 19. | |
| .7500 | 3/4 | | | 13/16-16 |
| .7656 | 49/64 | | | 13/16-20 7/8-9 |
| .7677 | | | 19.5 | M22×2.5 |
| .7812 | 25/32 | | | 13/16-28 13/16-32 |
| .7874 | | | 20. | |
| .7969 | 51/64 | | | 7/8-12 |
| .8071 | | | 20.5 | |
| .8125 | 13/16 | | | 7/8-14 7/8-16 |
| .8268 | | | 21. | M24×3 |
| .8281 | 53/64 | | | 7/8-20 |
| .8438 | 27/32 | | | 7/8-28 7/8-32 |
| .8465 | | | 21.5 | |
| .8594 | 55/64 | | | 15/16-12 |
| .8661 | | | 22. | |
| .8750 | 7/8 | | | 15/16-16 1-8 |
| .8858 | | | 22.5 | |
| .8906 | 57/64 | | | 15/16-20 |
| .9055 | | | 23. | |
| .9062 | 29/32 | | | 15/16-28 15/16-32 |
| .9219 | 59/64 | | | 1-12 |
| .9252 | | | 23.5 | |
| .9375 | 15/16 | | | 1-16 1 1/16-8 |
| .9449 | | | 24. | M27×3 |
| .9531 | 61/64 | | | 1-20 |
| .9646 | | | 24.5 | |
| .9688 | 31/32 | | | 1-28 1-32 |
| .9843 | | | 25. | |
| .9844 | 63/64 | | | 1 1/16-12 1 1/8-7 |
| 1.0000 | 1 | | | 1 1/16-16 1 1/8-8 |

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