

302 & 304

| Diameter, in. [mm] | Min. Number of bend | Tensile strength in ksi[MPa] | |
|---|---------------------|------------------------------|------------|
| | | Min. | Max. |
| Up to 0.009 [0.23], incl | ... | 325 [2240] | 355 [2450] |
| Over 0.009 [0.23] to 0.010 [0.25], incl | ... | 320 [2205] | 350 [2415] |
| Over 0.010 [0.25] to 0.011 [0.28], incl | ... | 318 [2190] | 348 [2400] |
| Over 0.011 [0.28] to 0.012 [0.30], incl | ... | 316 [2180] | 346 [2385] |
| Over 0.012 [0.30] to 0.013 [0.33], incl | ... | 314 [2165] | 344 [2370] |
| Over 0.013 [0.33] to 0.014 [0.36], incl | ... | 312 [2150] | 342 [2360] |
| Over 0.014 [0.36] to 0.015 [0.38], incl | ... | 310 [2135] | 340 [2345] |
| Over 0.015 [0.38] to 0.016 [0.41], incl | ... | 308 [2125] | 338 [2330] |
| Over 0.016 [0.41] to 0.017 [0.43], incl | ... | 306 [2110] | 336 [2315] |
| Over 0.017 [0.43] to 0.018 [0.46], incl | ... | 304 [2095] | 334 [2300] |
| Over 0.018 [0.46] to 0.020 [0.51], incl | ... | 300 [2070] | 330 [2275] |
| Over 0.020 [0.51] to 0.022 [0.56], incl | ... | 296 [2040] | 326 [2250] |
| Over 0.022 [0.56] to 0.024 [0.61], incl | ... | 292 [2015] | 322 [2220] |
| Over 0.024 [0.61] to 0.026 [0.66], incl | 8 | 291 [2005] | 320 [2205] |
| Over 0.026 [0.66] to 0.028 [0.71], incl | 8 | 289 [1995] | 318 [2190] |
| Over 0.028 [0.71] to 0.031 [0.79], incl | 8 | 285 [1965] | 315 [2170] |
| Over 0.031 [0.79] to 0.034 [0.86], incl | 8 | 282 [1945] | 310 [2135] |
| Over 0.034 [0.86] to 0.037 [0.94], incl | 8 | 280 [1930] | 308 [2125] |
| Over 0.037 [0.94] to 0.041 [1.04], incl | 8 | 275 [1895] | 304 [2095] |
| Over 0.041 [1.04] to 0.045 [1.14], incl | 8 | 272 [1875] | 300 [2070] |
| Over 0.045 [1.14] to 0.050 [1.27], incl | 8 | 267 [1840] | 295 [2035] |
| Over 0.050 [1.27] to 0.054 [1.37], incl | 8 | 265 [1825] | 293 [2020] |
| Over 0.054 [1.37] to 0.058 [1.47], incl | 7 | 261 [1800] | 289 [1990] |
| Over 0.058 [1.47] to 0.063 [1.60], incl | 7 | 258 [1780] | 285 [1965] |
| Over 0.063 [1.60] to 0.070 [1.78], incl | 7 | 252 [1735] | 281 [1935] |
| Over 0.070 [1.78] to 0.075 [1.90], incl | 7 | 250 [1725] | 278 [1915] |
| Over 0.075 [1.90] to 0.080 [2.03], incl | 7 | 246 [1695] | 275 [1895] |
| Over 0.080 [2.03] to 0.087 [2.21], incl | 7 | 242 [1670] | 271 [1870] |
| Over 0.087 [2.21] to 0.095 [2.41], incl | 7 | 238 [1640] | 268 [1850] |
| Over 0.095 [2.41] to 0.105 [2.67], incl | 5 | 232 [1600] | 262 [1805] |
| Over 0.105 [2.67] to 0.115 [2.92], incl | 5 | 227 [1565] | 257 [1770] |
| Over 0.115 [2.92] to 0.125 [3.17], incl | 5 | 222 [1530] | 253 [1745] |
| Over 0.125 [3.17] to 0.135 [3.43], incl | 3 | 217 [1495] | 248 [1710] |
| Over 0.135 [3.43] to 0.148 [3.76], incl | 3 | 210 [1450] | 241 [1660] |
| Over 0.148 [3.76] to 0.162 [4.11], incl | 3 | 205 [1415] | 235 [1620] |
| Over 0.162 [4.11] to 0.177 [4.50], incl | 3 | 198 [1365] | 228 [1570] |
| Over 0.177 [4.50] to 0.192 [4.88], incl | 1 | 194 [1335] | 225 [1550] |
| Over 0.192 [4.88] to 0.207 [5.26], incl | 1 | 188 [1295] | 220 [1515] |
| Over 0.207 [5.26] to 0.225 [5.72], incl | 1 | 182 [1255] | 214 [1475] |
| Over 0.225 [5.72] to 0.250 [6.35], incl | 1 | 175 [1205] | 205 [1415] |
| Over 0.250 [6.35] to 0.278 [7.06], incl | 1 | 168 [1160] | 198 [1365] |
| Over 0.278 [7.06] to 0.306 [7.77], incl | 1 | 161 [1110] | 192 [1325] |
| Over 0.306 [7.77] to 0.331 [8.41], incl | 1 | 155 [1070] | 186 [1280] |
| Over 0.331 [8.41] to 0.362 [9.19], incl | 1 | 150 [1035] | 180 [1240] |
| Over 0.362 [9.19] to 0.394 [10.00], incl | 1 | 145 [1000] | 175 [1205] |
| Over 0.394 [10.00] to 0.438 [11.12], incl | 1 | 140 [965] | 170 [1170] |
| Over 0.438 [11.12] to 0.500 [12.70], incl | 1 | 135 [930] | 165 [1140] |
| Over 0.500 [12.70] | ... | 130 [895] | 160 [1105] |

When wire is specified in straightened and cut lengths, the minimum tensile strength shall be 90 % of the values listed in the table.

Chemical composition

| UNS | Type | C | Mn | P | S | Si | Cr | Ni | Mo | N | Others |
|--------|------|------|------|-------|-------|------|-------|--------|----|------|--------|
| S30200 | 302 | 0.12 | 2.00 | 0.045 | 0.030 | 1.00 | 17~19 | 8~-10 | - | 0.10 | - |
| S30400 | 304 | 0.08 | 2.00 | 0.045 | 0.030 | 1.00 | 18~20 | 8-10.5 | - | 0.10 | - |

| Diameter, in. [mm] | Min. Number of bend | Tensile strength in ksi[MPa] | |
|--|---------------------|------------------------------|------------|
| | | Min. | Max. |
| Up to 0.010 [0.25], incl | ... | 245 [1690] | 275 [1895] |
| Over 0.010 [0.25] to 0.015 [0.38], incl | ... | 240 [1655] | 270 [1860] |
| Over 0.015 [0.38] to 0.024 [0.61], incl | ... | 235 [1620] | 265 [1825] |
| Over 0.024 [0.61] to 0.041 [1.04], incl | 8 | 235 [1620] | 265 [1825] |
| Over 0.041 [1.04] to 0.047 [1.19], incl | 8 | 230 [1585] | 260 [1790] |
| Over 0.047 [1.19] to 0.054 [1.37], incl | 8 | 225 [1550] | 255 [1760] |
| Over 0.054 [1.37] to 0.062 [1.57], incl | 7 | 220 [1515] | 250 [1725] |
| Over 0.062 [1.57] to 0.072 [1.83], incl | 7 | 215 [1480] | 245 [1690] |
| Over 0.072 [1.82] to 0.080 [2.03], incl | 7 | 210 [1450] | 240 [1655] |
| Over 0.080 [2.03] to 0.092 [2.34], incl | 7 | 205 [1415] | 235 [1620] |
| Over 0.092 [2.34] to 0.105 [2.67], incl | 5 | 200 [1380] | 230 [1585] |
| Over 0.105 [2.67] to 0.120 [3.05], incl | 5 | 195 [1345] | 225 [1550] |
| Over 0.120 [3.05] to 0.148 [3.76], incl | 3 | 185 [1275] | 215 [1480] |
| Over 0.148 [3.76] to 0.166 [4.22], incl | 3 | 180 [1240] | 210 [1450] |
| Over 0.166 [4.22] to 0.177 [4.50], incl | 3 | 170 [1170] | 200 [1380] |
| Over 0.177 [4.50] to 0.207 [5.26], incl | 1 | 160 [1105] | 190 [1310] |
| Over 0.207 [5.26] to 0.225 [5.72], incl | 1 | 155 [1070] | 185 [1275] |
| Over 0.225 [5.72] to 0.250 [6.35], incl | 1 | 150 [1035] | 180 [1240] |
| Over 0.250 [6.35] to 0.312 [7.92], incl | 1 | 140 [965] | 170 [1170] |
| Over 0.312 [7.92] to 0.375 [9.53], incl | 1 | 135 [930] | 165 [1140] |
| Over 0.375 [9.53] to 0.500 [12.70], incl | ... | 130 [895] | 160 [1105] |
| Over 0.500 [12.70] | ... | 125 [860] | 155 [1070] |

Chemical composition

| UNS | Type | C | Mn | P | S | Si | Cr | Ni | Mo | N | Others |
|--------|------|------|------|-------|-------|------|---------|-----------|-----------|------|--------|
| S31600 | 316 | 0.07 | 2.00 | 0.040 | 0.035 | 1.00 | 16.5-18 | 10.5~13.5 | 2.00-2.50 | 0.10 | - |

Diameter tolerance

| Specified Diameter, in. [mm] | Diameter Tolerances, in. [mm] |
|---|-------------------------------|
| Under 0.3125 to 0.0440 [8.00 to 1.00], incl | ±0.001 [0.03] |
| Under 0.0440 to 0.0330 [1.00 to 0.80], incl | ±0.0008 [0.02] |
| Under 0.0330 to 0.0240 [0.80 to 0.60], incl | ±0.0005 [0.015] |
| Under 0.0240 to 0.0120 [0.60 to 0.30], incl | ±0.0004 [0.010] |
| Under 0.0120 to 0.0080 [0.30 to 0.20], incl | ±0.0003 [0.008] |
| Under 0.0080 to 0.0048 [0.20 to 0.12], incl | ±0.0002 [0.005] |