



PROPERTIES OF HSFG PART I BOLT & NUT

| BOLT SIZE | PITCH | STRESS AREA MM2 | BOLT/STUD/SCREW BS 4395 Gr. 8.8 | | | | | | NUT BS 4395 Gr. 10 | | |
|-------------|---------------------|-----------------|--------------------------------------|---------------|----------------------|-------------|------------------------------|---------------|-------------------------|---------------|--------------|
| | | | PROOF STRESS N/MM2 | PROOF LOAD KN | TENSILE STRESS N/MM2 | TORQUE* N-m | HARDNESS HRC | ELONGATION# % | PROOF STRESS N/MM2 | PROOF LOAD KN | HARDNESS HRC |
| M6 | 1 | 20.1 | | | | | | | | | |
| M8 | 1.25 | 36.6 | | | | | | | | | |
| M10 | 1.5 | 58.8 | | | | | | | | | |
| M12 | 1.75 | 84.3 | 587 | 49.5 | 827.0 | 79.7 | 25-34 | 12.0 | 1176 | 99.1 | -30 |
| M14 | 2.0 | 115.0 | 587 | 66.5 | 827.0 | 126.9 | 25-34 | 12.0 | 1176 | 135.2 | -30 |
| M16 | 2.0 | 157.0 | 587 | 92.2 | 827.0 | 198.0 | 25-34 | 12.0 | 1176 | 184.6 | -30 |
| M18 | 2.5 | 192.0 | 587 | 112.7 | 827.0 | 272.3 | 25-34 | 12.0 | 1176 | 225.8 | -30 |
| M20 | 2.5 | 245.0 | 587 | 143.8 | 827.0 | 386.1 | 25-34 | 12.0 | 1176 | 288.1 | -30 |
| M22 | 2.5 | 303.0 | 587 | 177.9 | 827.0 | 525.3 | 25-34 | 12.0 | 1176 | 356.3 | -30 |
| M24 | 3.0 | 353.0 | 587 | 207.2 | 827.0 | 667.6 | 25-34 | 12.0 | 1176 | 415.1 | -30 |
| M27 | 3.0 | 459.0 | 512 | 235.0 | 725.0 | 851.8 | 25-34 | 12.0 | 1176 | 539.8 | -30 |
| M30 | 3.5 | 561.0 | 512 | 287.2 | 725.0 | 1,157 | 25-34 | 12.0 | 1176 | 659.7 | -30 |
| M33 | 3.5 | 694.0 | 512 | 355.3 | 725.0 | 1,574 | 25-34 | 12.0 | 1176 | 816.1 | -30 |
| M36 | 4.0 | 817.0 | 512 | 418.3 | 725.0 | 2,022 | 25-34 | 12.0 | 1176 | 960.8 | -30 |
| M39 | 4.0 | 976.0 | | | | | | | | | |
| M42 | 4.5 | 1,120.0 | | | | | | | | | |
| M45 | 4.5 | 1,310.0 | | | | | | | | | |
| M48 | 5.0 | 1,470.0 | | | | | | | | | |
| M52 | 5.0 | 1,760.0 | | | | | | | | | |
| M56 | 5.5 | 2,030.0 | | | | | | | | | |
| M60 | 5.5 | 2,360.0 | | | | | | | | | |
| M64 | 6.0 | 2,680.0 | | | | | | | | | |
| M68 | 6.0 | 3,060.0 | | | | | | | | | |
| M72 | 6.0 | 3,460.0 | | | | | | | | | |
| DIMENSIONS | HEAVY HEX (HSFG) | | | | | | HEAVY HEX (HSFG) | | | | |
| MARKINGS | '8.8HR' | | | | | | '8HR' | | | | |
| CARBON | 0.25 - 0.55 | | | | | | -0.58 | | | | |
| MANAGENESE | | | | | | | -0.30 | | | | |
| SULPHUR | -0.035 | | | | | | -0.15 | | | | |
| SILICON | | | | | | | | | | | |
| CHROMIUM | | | | | | | | | | | |
| MOLYDENUM | | | | | | | | | | | |
| NICKLE | | | | | | | | | | | |
| VANADIUM | | | | | | | | | | | |
| BORON | -0.003 | | | | | | | | | | |
| PHOSPHOROUS | -0.035 | | | | | | -0.06 | | | | |
| Material | Medium Carbon Steel | | | | | | Medium Carbon or Alloy Steel | | | | |

NOTES:

Left hand side of '-' is minimum value
 Right hand side of '-' is maximum value
 Eg. 0.5 - 0.7 min. is 0.5 and max is 0.7
 Eg. -0.8 max is 0.8 no minimum value
 Eg. 2.0- min. is 2.0 no maximum value

* Torque value based on 75% of proof load and finish as recieved steel