

## **GRADE MARK**

| THREAD DATA   |   |   |
|---|---|---|
| <b>Size:</b> 5/8  | Threads per in.: 11   | Series Designation: UNC                                       |
| Thread Class or Type: 2A  | Major Diameter: 0.6233 - 0.6112   | Pitch and Functional Dia.: 0.5643 - 0.5588                    |
| Tensile Stress Area: 0.2260                                     | Standard: ASME B1.1 - 2003 (R2008)  |   |
| DIMENSIONAL DATA  |   |   |
| Type: Hex Tap Bolts   | Standard: IFI - 199   | Nominal Diameter: 0.625                                       |
| F - Width Across Flats: 0.938 - 0.906                           | G - Width Across Corners: 1.083 - 1.033                                       | R - Fillet Radius: 0.060 - 0.020                              |
| H - Head Height: 0.444 - 0.378                                  | L <sub>T</sub> - Thread Length for Screw Length 6 in. or less: Fully Threaded | Point Type: Non-pointed                                       |
| L - Length: 5   | Length Tolerance: +0.10/-0.10   |   |
| PHYSICAL REQUIREMENTS   |   |   |
| Nominal: 0.625  | Standard: ASTM A307A-2014   | <b>Typical Materials:</b> low carbon steel, 1006 through 1022 |
| Hardness: HRB 69 - 100  | Tensile Load, Min. (lbf): 13,560  | Yield PSI, 2% Offset, Machined Specimen: 36,000               |
| Elongation, min. %, Machined Specimen: 18                       | Tensile Strength, Min. (psi): 60,000  | Calculated Shear Load-BODY (ref.)(lbf): 8,136                 |
| Calculated Shear Load-THREADS (ref.)(lbf): 6,780                | Straightness Factor: 0.03   | Calculated Pretension <sup>2</sup> (lbf): 6,102               |
| Tightening Torque <sup>1</sup> : 70 ft.lbf, 839 in.lbf, 94.8 Nm |   |   |
| FINISH DATA   |   |   |
| Finish: Zinc & Clear, non-hexavalent/Cr(VI) free0001"/ 3μm      | K factor (ref. DIN 946): 0.22   | Standard: ASTM F1941/F1941M-2016, Fe/Zn 3AN                   |

<sup>1</sup> These torque values are based on K factors determined using DIN 946, tightening tension of 75% of the yield strength, and the calculation formula T=KDP. These values are advisory only. The torque for assembling critical joints should be determined and/or verified through actual experimentation by the user. The IFI is not responsible for any losses or claims resulting from the use of these values. <sup>2</sup> Calculated Pretension is equal to 75% of the bolt's yield strength achieved when using the indicated Tightening Torque.



