

# SPECIFICATION

Roadside Safety Devices

Designator: **TFBX12a**

Description: **HEX BOLT AND NUT**

**Manitoba**   
**Infrastructure and  
Transportation**

Traffic Engineering

Hex Bolt shall be manufactured according to the geometric specifications included in ANSI B18.2.3.5M. Threads shall conform to ANSI B1.13M for Class 6g threads. Material for zinc coated bolts shall conform to ASTM F568 for Class 4.6 (400 MPa tensile strength and 240 MPa yield strength). Material for corrosion resistant bolts shall conform to ASTM F568 for Class 8.8.3 (830 MPa tensile strength and 660 MPa yield strength). Bolt heads shall be marked as specified in ASTM F568 Section 9 with the symbol "4.6" if zinc coated and "8.8.3" if corrosion resistant steel is used.

Zinc coated nuts shall be manufactured according to the dimensions and tolerances in ANSI B18.2.4.1M for metric Style 1 hex nuts (shown in drawing). Corrosion resistant nuts shall be manufactured according to the dimensions and tolerances in ANSI B18.2.4.6M for heavy hex nuts (not shown in drawing). Threads shall conform to ANSI B1.13M for Class 6H. Zinc coated nuts shall conform to the requirements of AASHTO M291M (ASTM A563M) for Class 5 nuts. Corrosion resistant nuts shall conform to the requirements of AASHTO M291M (ASTM A563M) for Class 8S3.

Zinc coated bolts and nuts shall be treated according to either AASHTO M232 (ASTM A153) or AASHTO M298 (ASTM B695) for Class 50.

Designator	Stress Area of Threaded Bolt Shank (mm <sup>2</sup> )	Minimum Bolt Bolt Strength (kN)
TFBX12a	84.3	33.7

Dimensional tolerances not shown or implied are intended to be those consistent with the proper functioning of the part, including its appearance and accepted manufacturing practices. Hex Bolt and Nut may be supplied in the nearest equivalent Imperial, or English, units and corresponding manufacturing specification.

Hex Bolt and Nut shall be supplied in separate, sturdy, waterproof pails that are either plastic or metal. The containers must be suitable for storage outdoors and withstand, for up to 12 months, typical weather conditions and UV exposure that would be expected in Manitoba.

Effective Date: September 1, 2001

Revised Date: May 6, 2014

