

ICS 21.060.20
CCS J 13



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 6177.2-2016

**Hexagon nuts with flange, style 2 -- Fine pitch thread
(English Translation)**

Issued on: February 24, 2016

Implemented on: June 1, 2016

**Issued by: General Administration of Quality Supervision, Inspection and
Quarantine**

Table of Contents

Foreword...	3
1 Scope...	6
2 Normative References...	6
3 Dimension...	7
4 Technical Conditions and Reference Standards...	9
5 Markings...	10
Appendix A (Normative) Hexagon and Flange Inspection...	11

Foreword

This Part of GB/T 6177 is one of the serial national standards for "Hexagon Nuts", which includes.

- GB/T 41 Hexagon Nuts, Style 1 - Product Grade C;
- GB/T 6170 Hexagon Nuts, Style 1;
- GB/T 6171 Hexagon Nuts, Style 1 - Fine Pitch Thread;
- GB/T 6172.1 Hexagon Thin Nuts;
- GB/T 6173 Hexagon Thin Nuts - Fine Pitch Thread;
- GB/T 6174 Hexagon Thin Nuts - Unchamfered;
- GB/T 6175 Hexagon Nuts, Style 2
- GB/T 6176 Hexagon Nuts, Style 2 - Fine Pitch Thread
- GB/T 6177.1 Hexagon Nuts with Flange, Style 2;
- GB/T 6177.2 Hexagon Nuts with Flange, Style 2 - Fine Pitch Thread

This Part belongs to the Part 2 of GB/T 6177.

This Standard was drafted as per the rules specified in GB/T 1.1-2009.

This Part replaced GB/T 6177.2-2000 Hexagon Nuts with Flange - Fine Pitch Thread;

Compared with GB/T 6177.2-2000, this Part mainly has the following major technical changes.

- Modify the standard name;

--- Delete "if other technical requirements are needed,... the selection in GB/T

3098.4 and GB/T 3103.1." (Chapter 1 of Edition 2000);

--- Unify the reference thread standards to be GB/T 193, GB/T 9145 (Chapter 2);

--- Modify the mechanical property grades of steel nuts into 8, 10 (QT), 12 (QT)
(Table 2);

--- Increase the mechanical properties of steel nuts. QT - Quenching and Tempering
(Table 2);

--- Increase the surface of steel nuts without treatment, delete the oxidation
treatment (Table 2);

Hexagon Nuts with Flange, Style 2 - Fine Pitch Thread

1 Scope

This Part of GB/T 6177 specifies the type dimension, technical conditions and markings of hexagon nuts with flange, style 2 - fine pitch thread.

This Part is applicable to the hexagon nuts with flange, Style 2 with thread nominal diameter $D = 8\text{mm} \sim 20\text{mm}$; fine threads and performance grades are Grade 8, 10, 12; A2-70, and product grades are Grade A and B. Grade A is applied to the nuts with $D \leq 16\text{mm}$; while Grade B is applied to the nuts with $D > 16\text{mm}$.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 90.1 Fasteners - Acceptance Inspection (GB/T 90.1-2002, ISO 3269.2000, IDT)

GB/T 90.2 Fasteners - Marking and Packaging

GB/T 193 General Purpose Screw Threads - Diameters and Pitches (GB/T 193-2003, ISO 261.1998, MOD)

GB/T 1237 Designation System for Fasteners (GB/T 1237-2000, eqv ISO 8991.1986)

GB/T 3098.2 Mechanical Properties of Fasteners - Nuts (GB/T 3098.2-2015, ISO 898-2:2012, MOD)

GB/T 3098.15 Mechanical Properties of Fasteners - Nuts Made of Stainless Steel (GB/T 3098.15-2014, ISO 3506-2:2009, MOD)

GB/T 3103.1 Tolerances for Fasteners - Bolts, Screws and Nuts (GB/T 3103.1-2002, idt ISO 4759-1:2000)

GB/T 5267.1 Fasteners - Electroplated Coatings (GB/T 5267.1-2002, ISO 4042:1999, IDT)

Appendix A

(Normative)

Hexagon and Flange Inspection

A.1 Recommended inspection method of hexagon part

The recommended inspection method of hexagon part can refer to Figure A.1 and Table A.1.

To determine whether the hexagon height, wrenching height, width of rounded angle and opposite edges meet the requirements, two smooth ring gauges A and B shall be used to measure the head. Gauge A shall be fitted in hexagon and over the flange. Gauge B shall be placed on the top surface perpendicular to the axis of nuts. The two gauges shall not contact.

A.2 Recommended inspection method of flange thickness

The recommended inspection method of flange thickness can refer to Figure A.1 and Table A.1.

Gauge C is a feeler gauge or ring gauge. It is used to check whether the flange thickness on the joint between gauge and hexagon part equals to or greater than the specified value. When the nut is placed on the plate, Gauge C shall be inserted under Gauge A, and the two gauges shall not contact.

Instructions.

1 - Gauge A;

.....