

INCH-POUND

MIL-DTL-45913/4

30 APRIL 1998

SUPERSEDING

MS51943C

23 June 1976

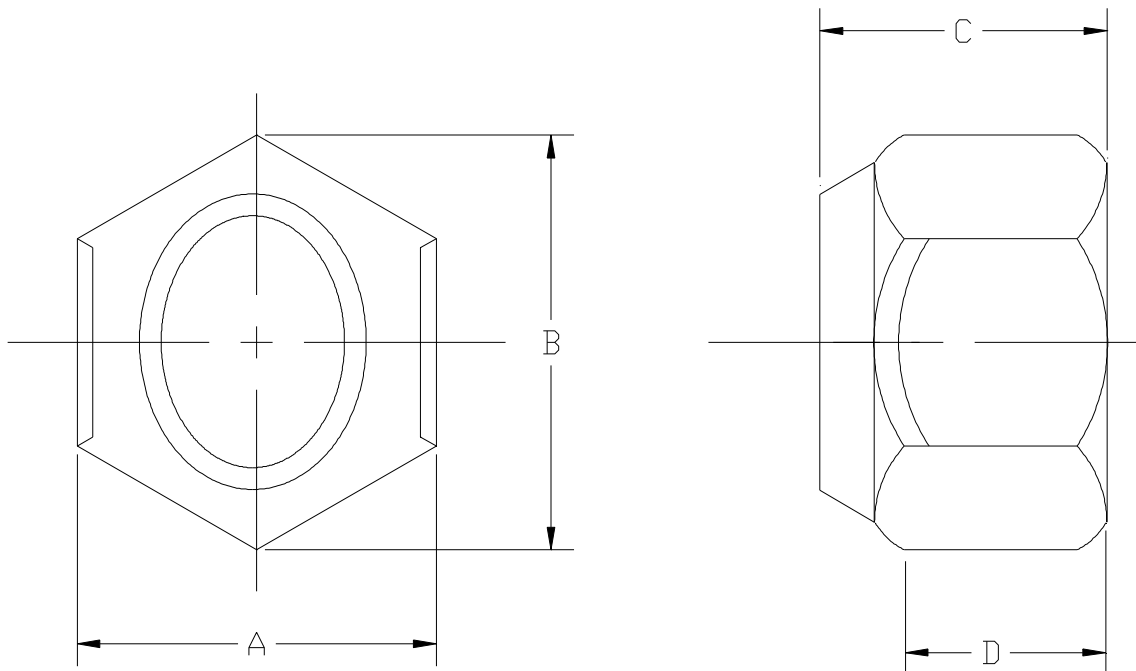
MILITARY SPECIFICATION SHEET

NUT, SELF-LOCKING, HEXAGON

ALL-METAL LOCKING FEATURE, 250°F, UNC/ UNF-3B

This specification is approved for use by all Departments
and Agencies of the Department of Defense.

The requirements for acquiring the product described herein shall consist of this specification sheet and the issue of the following specification listed in that issue of the Department of Defense Index of Specification and Standards (DoDISS) specified in the solicitation: MIL-DTL-45913.



NOTES:

1. All dimensions are in inches.

FIGURE 1. NUT, SELF LOCKING, HEX, ALL-METAL LOCKING FEATURE, UNC/ UNF3B

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REQUIREMENTS:

1. MATERIAL.

Steel and alloy steel shall be in accordance with SAE J995 grade 5 or 8, as specified in part-number.

Corrosion resisting steel (stainless steel) grades 303 and 316, as specified, shall have a minimum ultimate tensile strength of 70 KSI and shall be non-magnetic.

Copper alloy (brass) shall have a minimum ultimate tensile strength of 58 KSI and be of a half hard temper.

Aluminum alloy shall have a minimum ultimate tensile strength of 62 KSI.

2. PLATING/FINISH.

Steel and alloy steel locknuts shall be cadmium plated per QQ-P-416 Type II, Class 2 or 3, or zinc plated per ASTM B633 Type II, Fe/Zn 8 or uncoated plain with a supplementary lubricant which is clean and dry to the touch.

Stainless steel locknuts shall be passivated per QQ-P-35 or black oxide finish per MIL-C-13924.

Brass locknuts shall be black oxide finished per MIL-F-495, nickel plated per QQ-N-290, Class 2, or uncoated plain with a brite finish.

Aluminum locknuts shall be anodized clear, no color per MIL-A-8625 (see TABLE II).

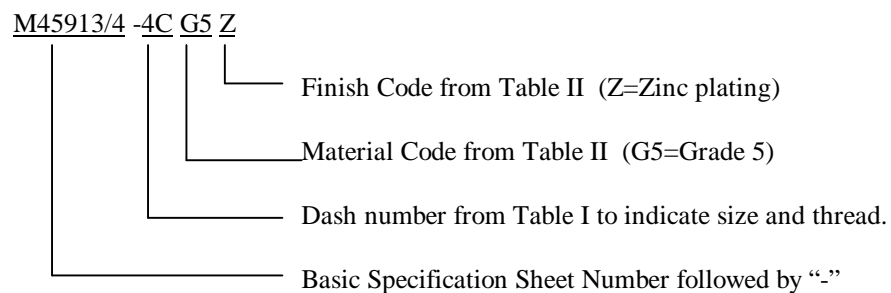
3. SURFACE TEXTURE. Shall be Ra 125 microinches in accordance with ANSI/ASME B46.1.

4. THREADS. Shall be coarse or fine threaded, class 3B, as specified in part-number, in accordance with ASME B1.1.

5. WORKMANSHIP. Parts shall be manufactured and processed with a level of care and workmanship befitting this type of product intended for general purpose military application. Parts shall be free from dirt, grease, loose or deposited foreign materials, sharp edges, burrs, chips, physical malformations or anything that might prevent the part from reliably performing its intended function.

6. PART NUMBER. The part number shall consist of the basic number of this specification sheet, a material code from table II, a dash number from table I, and a finish/plate code (when required) from table II.

EXAMPLE OF PART-NUMBER



M45913/4-4CG5Z = Nut Self-Locking Hexagon, all-metal locking feature, .250-20 UNC-3B thread, Grade 5 steel, zinc plated.

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TABLE I. DASH NUMBERS AND DIMENSIONS

| Dash No. | Thread Size | A | | B | C | | D |
|----------|-----------------|--------------------|-------|---------|-----------|-------|------|
| | | Width Across Flats | | Corners | Thickness | | |
| | | MAX | MIN | REF | MAX | MIN | |
| 00F | .060-80 UNF-3B | .111 | .104 | .116 | .055 | .080 | .045 |
| 01C | .073-64 UNC-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 01F | .073-72 UNF-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 02C | .086-56 UNC-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 02F | .086-64 UNF-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 03C | .099-48 UNC-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 03F | .099-56 UNF-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 04C | .112-40 UNC-3B | .251 | .241 | .275 | .163 | .087 | .066 |
| 04F | .112-48 UNF-3B | .251 | .241 | .275 | .163 | .087 | .066 |
| 05C | .125-40 UNC-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 05F | .125-44 UNF-3B | .251 | .243 | .268 | .153 | .133 | .081 |
| 06C | .138-32 UNC-3B | .313 | .302 | .344 | .171 | .102 | .075 |
| 06F | .138-40 UNF-3B | .313 | .302 | .344 | .171 | .102 | .075 |
| 08C | .164-32 UNC-3B | .345 | .332 | .378 | .191 | .117 | .083 |
| 08F | .164-36 UNF-3B | .345 | .332 | .378 | .191 | .117 | .083 |
| 010C | .190-24 UNC-3B | .376 | .362 | .413 | .241 | .117 | .083 |
| 010F | .190-32 UNF-3B | .376 | .362 | .413 | .241 | .117 | .083 |
| 012C | .216-24 UNC-3B | .439 | .423 | .482 | .241 | .148 | .103 |
| 012F | .216-28 UNF-3B | .439 | .423 | .482 | .241 | .148 | .103 |
| 4C | .250-20 UNC-3B | .439 | .428 | .488 | .288 | .212 | .145 |
| 4F | .250-28 UNF-3B | .439 | .428 | .488 | .288 | .212 | .145 |
| 5C | .312-18 UNC-3B | .502 | .489 | .557 | .336 | .258 | .166 |
| 5F | .312-24 UNF-3B | .502 | .489 | .557 | .336 | .258 | .166 |
| 6C | .375-16 UNC-3B | .564 | .551 | .628 | .415 | .320 | .198 |
| 6F | .375-24 UNF-3B | .564 | .551 | .628 | .415 | .320 | .198 |
| 7C | .437-14 UNC-3B | .688 | .675 | .768 | .463 | .365 | .223 |
| 7F | .437-20 UNF-3B | .688 | .675 | .768 | .463 | .365 | .223 |
| 8C | .500-13 UNC-3B | .752 | .736 | .840 | .573 | .427 | .262 |
| 8F | .500-20 UNF-3B | .752 | .736 | .840 | .573 | .427 | .262 |
| 9C | .562-12 UNC-3B | .877 | .861 | .982 | .621 | .473 | .286 |
| 9F | .562-18 UNF-3B | .877 | .861 | .982 | .621 | .473 | .286 |
| 10C | .625-11 UNC-3B | .940 | .922 | 1.051 | .731 | .535 | .329 |
| 10F | .625-18 UNF-3B | .940 | .922 | 1.051 | .731 | .535 | .329 |
| 12C | .750-10 UNC-3B | 1.127 | 1.088 | 1.240 | .827 | .617 | .382 |
| 12F | .750-16 UNF-3B | 1.127 | 1.088 | 1.240 | .827 | .617 | .382 |
| 14C | .875-9UNC-3B | 1.314 | 1.269 | 1.447 | .922 | .724 | .450 |
| 14F | .875-14 UNF-3B | 1.314 | 1.269 | 1.447 | .922 | .724 | .450 |
| 16C | 1.000-8UNC-3B | 1.502 | 1.450 | 1.653 | 1.018 | .831 | .513 |
| 16F | 1.000-12 UNF-3B | 1.502 | 1.450 | 1.653 | 1.018 | .831 | .513 |
| 18C | 1.125-7UNC-3B | 1.689 | 1.631 | 1.859 | 1.176 | .939 | .576 |
| 18F | 1.125-12 UNF-3B | 1.689 | 1.631 | 1.859 | 1.176 | .939 | .576 |
| 20C | 1.250-7UNC-3B | 1.877 | 1.812 | 2.066 | 1.272 | 1.030 | .628 |
| 20F | 1.250-12 UNF-3B | 1.877 | 1.812 | 2.066 | 1.272 | 1.030 | .628 |
| 22C | 1.375-6UNC-3B | 2.064 | 1.994 | 2.273 | 1.399 | 1.138 | .681 |
| 22F | 1.375-12 UNF-3B | 2.064 | 1.994 | 2.273 | 1.399 | 1.138 | .681 |
| 24C | 1.500-6UNC-3B | 2.252 | 2.175 | 2.480 | 1.526 | 1.245 | .757 |
| 24F | 1.500-12 UNF-3B | 2.252 | 2.175 | 2.480 | 1.526 | 1.245 | .757 |

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TABLE II. MATERIAL AND FINISH CODING

| MATERIAL CODE | | FINISH CODE | |
|---------------------|----|-------------|--------------------------|
| Steel Grade 5 | G5 | Cadmium | C |
| Steel Grade 8 | G8 | Zinc | Z |
| Stainless Steel 303 | S3 | Black Oxide | B |
| Stainless Steel 316 | S6 | Nickel | N |
| Brass | BB | Anodized | no code (aluminum only) |
| Aluminum | AA | Passivate | no code (stainless only) |
| | | Uncoated | no code |

NOTE: See requirement 2 for compatibility of material and finish.

NOTES:

1. Dimensions in inches, unless specified, tolerance: $\pm .016$.
2. Interpret drawing in accordance with ASME Y14.5M.
3. Break all Sharp edged .003 to .005 and remove all burrs and slivers.
4. In the event of a conflict between the text of this document and the references cited herein, the text of this document shall take precedence.
5. Unless otherwise specified, issues of referenced documents are those in effect at the time of solicitation.

Custodians:

Army - AR
Air Force - 82
Navy - OS

Preparing activity
DLA - IS

Review activities:

Army - AV, AT, EA, GL, MI, CR4
Air Force - 99
Navy - AS, MC, YD

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