INCH-POUND MS51969C <u>15 August 2011</u> SUPERSEDING MS51969B 24 July 1972

# DETAIL SPECIFICATION SHEET

# NUT, PLAIN, HEXAGON – BRASS, BLACK CHEMICAL FINISH, UNC-2B

This specification sheet 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 procurement specification FF-N-836.

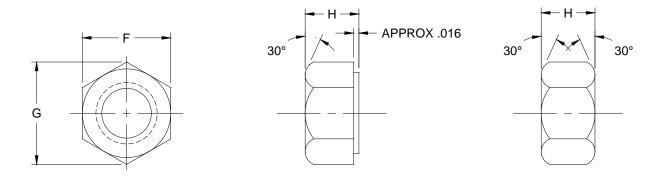


FIGURE 1. Nut, Acceptable Designs.

## MS51969C

#### TABLE I. Dash Numbers and Dimensions.

| MATER              | IAL     | DASH   | DASH   | DASH   |
|--------------------|---------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|
|                    |         | NO     | NO     | NO     |
| BRASS              |         | 1     | 2     | 3     | 4     | 5     | 6     | 7     | 8      | 9      | 10     |
| NOMINAL S          | SIZE OR | 1/4   | 5/16  | 3/8   | 7/16  | 1/2   | 9/16  | 5/8   | 3/4    | 7/8    | 1      |
| BASIC M            | AJOR    | .2500 | .3125 | .3750 | .4375 | .5000 | .5625 | .6250 | .7500  | .8750  | 1.0000 |
| DIAMETER OF THREAD |         |       |       |       |       |       |       |       |        |        |        |
| THREADS P          | ER INCH | 20    | 18    | 16    | 14    | 13    | 12    | 11    | 10     | 9      | 8      |
| WIDTH              | NOM.    | 7/16  | 1/2   | 9/16  | 11/16 | 3/4   | 7/8   | 15/16 | 1-1/8  | 1-5/16 | 1-1/2  |
| F ACROSS           | MAX.    | .4375 | .5000 | .5625 | .6875 | .7500 | .8750 | .9375 | 1.1250 | 1.3125 | 1.5000 |
| FLATS              | MIN.    | .428  | .489  | .551  | .675  | .736  | .861  | .922  | 1.088  | 1.269  | 1.450  |
| WIDTH              | MAX.    | .505  | .577  | .650  | .794  | .866  | 1.010 | 1.083 | 1.299  | 1.516  | 1.732  |
| G ACROSS           |         |       |       |       |       |       |       |       |        |        | 1.653  |
| CORNERS            | MIN.    | .488  | .557  | .628  | .768  | .840  | .982  | 1.051 | 1.240  | 1.447  |        |
|                    | NOM.    | 7/32  | 17/64 | 21/64 | 3/8   | 7/16  | 31/64 | 35/64 | 41/64  | 3/4    | 55/64  |
| H THICKNESS        | S MAX.  | .226  | .273  | .337  | .385  | .448  | .496  | .559  | .665   | .776   | .887   |
|                    | MIN.    | .212  | .258  | .320  | .365  | .427  | .473  | .535  | .617   | .724   | .831   |
|                    |         |       |       |       |       |       |       |       |        |        |        |
| MATERIAL           |         | DASH   | DASH   | DASH   |

| MATERIA            | AL.    | DASH    | DASH   | DASH    | DASH   | DASH   | DASH    | DASH    | DASH   | DASH    | DASH    |
|--------------------|--------|---------|--------|---------|--------|--------|---------|---------|--------|---------|---------|
|                    |        | NO      | NO     | NO      | NO     | NO     | NO      | NO      | NO     | NO      | NO      |
| BRASS              |        | 11      | 12     | 13      | 14     | 15     | 16      | 17      | 18     | 19      | 20      |
| NOMINAL SIZE OR    |        | 1-1/8   | 1-1/4  | 1-3/8   | 1-1/2  | 1-3/4  | 2       | 2-1/4   | 2-1/2  | 2-3/4   | 3       |
| BASIC MAJOR        |        | 1.1250  | 1.2500 | 1.3750  | 1.5000 | 1.7500 | 2.0000  | 2.2500  | 2.5000 | 2.7500  | 3.0000  |
| DIAMETER OF THREAD |        |         |        |         |        |        |         |         |        |         |         |
| THREADS PE         | R INCH | 7       | 7      | 6       | 6      | 5      | 4-1/2   | 4-1/2   | 4      | 4       | 4       |
| WIDTH              | NOM.   | 1-11/16 | 1-7/8  | 2-1/16  | 2-1/4  | 2-5/8  | 3       | 3-3/8   | 3-3/4  | 4-1/8   | 4-1/2   |
| F ACROSS           | MAX.   | 1.6875  | 1.8750 | 2.0625  | 2.2500 | 2.6250 | 3.0000  | 3.3750  | 3.7500 | 4.1250  | 4.5000  |
| FLATS              | MIN.   | 1.631   | 1.812  | 1.994   | 2.175  | 2.538  | 2.900   | 3.262   | 3.625  | 3.988   | 4.350   |
| WIDTH              | MAX.   | 1.949   | 2.165  | 2.382   | 2.598  | 3.031  | 3.464   | 3.897   | 4.330  | 4.763   | 5.196   |
| G ACROSS           |        |         |        |         |        |        |         |         |        |         |         |
| CORNERS            | MIN.   | 1.859   | 2.066  | 2.273   | 2.480  | 2.893  | 3.306   | 3.719   | 4.133  | 4.546   | 4.959   |
|                    | NOM.   | 31/32   | 1-1/16 | 1-11/64 | 1-9/32 | 1-1/2  | 1.23/32 | 1-59/64 | 2-9/64 | 2-23/64 | 2-37/64 |
| H THICKNESS        | MAX.   | .999    | 1.094  | 1.206   | 1.317  | 1.540  | 1.763   | 1.970   | 2.193  | 2.415   | 2.638   |
|                    | MIN.   | .939    | 1.030  | 1.138   | 1.245  | 1.460  | 1.675   | 1.874   | 2.089  | 2.303   | 2.518   |

# NOTES:

- 1. <u>Material</u>: Brass, Naval, in accordance with ASTM B21/B21M, Copper, Alloy UNS C46200, H04 hard or UNS C46400, H02 half-hard.
- 2. Protective Coating: Black chemical finish in accordance with MIL-F-495.
- 3. Threads: The threads shall be in accordance with FED-STD-H28/2.
- 4. Dimensions: All dimensions are in inches, unless otherwise specified.
- 5. Part Number: The MS part number consists of the MS number, plus the dash number. Example: MS51969-1.
- 6. Referenced documents shall be of the issue in effect on date of invitations for bid.
- 7. For design feature purposes, this standard takes precedence over procurement documents referenced herein.

## MS51969C

- 8. Black oxide coated brass threaded fasteners are prohibited from use on Navy ships. See S9086-CJ-STM-010, Naval Ship's Technical Manual, Chapter 075, Fasteners.
- 9. Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extent of the changes.

The following nuts covered by dash numbers given in MS35690 are cancelled after the date indicated on the cancelled document. Use the dash numbers given in the preceding sheet. The cancelled nuts cannot always replace the new nuts and should be used until existing stocks are depleted. Use only the new nuts for design and replacement. Replacement shall be in accordance with Table II. Interchangeability information regarding part numbers on superseding drawings is also contained in Table II.

| PART NUMBERS |         |           |         |           |         |  |  |
|--------------|---------|-----------|---------|-----------|---------|--|--|
| CANCELLED    | NEW     | CANCELLED | NEW     | CANCELLED | NEW     |  |  |
| MS35690      | MS51969 | MS35690   | MS51969 | MS35690   | MS51969 |  |  |
| 411          | 1       | 911       | 6       | 2411      | 14      |  |  |
| 412          | 1       | 1011      | 7       | 2811      | 15      |  |  |
| 511          | 2       | 1211      | 8       | 3211      | 16      |  |  |
| 512          | 2       | 1411      | 9       | 3611      | 17      |  |  |
| 611          | 3       | 1611      | 10      | 4011      | 18      |  |  |
| 612          | 3       | 1811      | 11      | 4411      | 19      |  |  |
| 711          | 4       | 2011      | 12      | 4811      | 20      |  |  |
| 811          | 5       | 2211      | 13      |           |         |  |  |

| Table II. | Interchangeability | y table of cancelled and su | perseding part numbers. |
|-----------|--------------------|-----------------------------|-------------------------|
|           |                    |                             |                         |

# MILITARY INTEREST

Preparing activity: DLA - IS

Custodians: Army – AR Navy – SH Air Force – 71

(Project 5310-2011-011)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <a href="https://assist.daps.dla.mil">https://assist.daps.dla.mil</a>