

INCH-POUND

MS51971C  
 11 JULY 2007  
 SUPERSEDING  
 MS51971B  
 28 January 1969

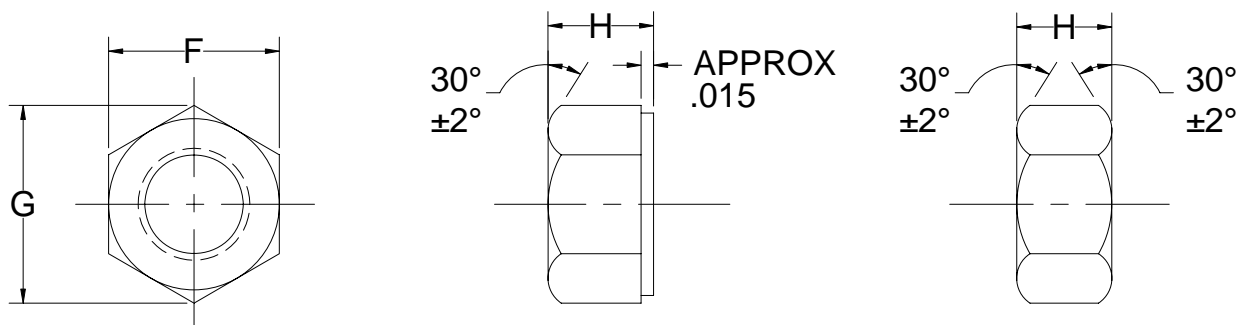
## MILITARY SPECIFICATION SHEET

NUT, PLAIN, HEXAGON-STEEL, CORROSION RESISTING, 300 SERIES,  
 PASSIVATED, UNC-2B

Reactivated after 11 JULY 2007 and may be used for new and existing  
 designs and acquisitions.

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 FF-N-836.



## ACCEPTABLE DESIGNS

FIGURE 1. NUT, PLAIN, HEXAGON

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TABLE I. Dash numbers and dimensions

| NOMINAL SIZE OR<br>BASIC MAJOR<br>DIAMETER OF THREAD |                   |              | 1/4<br>.2500     | 5/16<br>.3125    | 3/8<br>.3750     | 7/16<br>.4375    | 1/2<br>.5000     | 9/16<br>.5625    | 5/8<br>.6250     | 3/4<br>.7500     | 7/8<br>.8750     | 1<br>1.0000      |
|--|-------------------|--------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|------------------|
| THREADS PER INCH                                     |                   |              | 20               | 18               | 16               | 14               | 13               | 12               | 11               | 10               | 9                | 8                |
| F  | 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            |
|  | ACROSS<br>FLATS   | MAX.<br>MIN. | .4375<br>.4280   | .5000<br>.4890   | .5625<br>.5510   | .6875<br>.6750   | .7500<br>.7360   | .8750<br>.8610   | .9375<br>.9220   | 1.1250<br>1.0880 | 1.3125<br>1.2690 | 1.5000<br>1.4500 |
| G  | 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            |
|  | ACROSS<br>CORNERS | MAX.<br>MIN. | .5050<br>.4880   | .5770<br>.5570   | .6500<br>.6280   | .7940<br>.7680   | .8660<br>.8400   | 1.0100<br>.9820  | 1.0830<br>1.0510 | 1.2990<br>1.2400 | 1.5160<br>1.4470 | 1.7320<br>1.6530 |
| H  | THICKNESS         | NOM.         | 7/32             | 17/64            | 21/64            | 3/8              | 7/16             | 31/64            | 35/64            | 41/64            | 3/4              | 55/64            |
|  |                   | MAX.<br>MIN. | .2260<br>.2120   | .2730<br>.2580   | .3370<br>.3200   | .3850<br>.3650   | .4480<br>.4270   | .4960<br>.4730   | .5590<br>.5350   | .6650<br>.6170   | .7760<br>.7240   | .8870<br>.8310   |
| MATERIAL   |                   |              | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      |
| STEEL, CORROSION<br>RESISTING                        |                   |              | 1                | 2                | 3                | 4                | 5                | 6                | 7                | 8                | 9                | 10               |
| NOMINAL SIZE OR<br>BASIC MAJOR<br>DIAMETER OF THREAD |                   |              | 1-1/8<br>1.1250  | 1-1/4<br>1.2500  | 1-3/8<br>1.3750  | 1-1/2<br>1.5000  | 1-3/4<br>1.7500  | 2<br>2.0000      | 2-1/4<br>2.2500  | 2-1/2<br>2.5000  | 2-3/4<br>2.7500  | 3<br>3.0000      |
| THREADS PER INCH                                     |                   |              | 7                | 7                | 6                | 6                | 5                | 4-1/2            | 4-1/2            | 4                | 4                | 4                |
| F  | 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            |
|  | ACROSS<br>FLATS   | MAX.<br>MIN. | 1.6875<br>1.6310 | 1.8750<br>1.8120 | 2.0625<br>1.9940 | 2.2500<br>2.1750 | 2.6250<br>2.5380 | 3.0000<br>2.9000 | 3.3750<br>3.2620 | 3.7500<br>3.6250 | 4.1250<br>3.9880 | 4.5000<br>4.3500 |
| G  | 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            |
|  | ACROSS<br>CORNERS | MAX.<br>MIN. | 1.9490<br>1.8590 | 2.1650<br>2.0660 | 2.3820<br>2.2730 | 2.5980<br>2.4800 | 3.0310<br>2.8930 | 3.4040<br>3.3060 | 3.8970<br>3.7190 | 4.3300<br>4.1330 | 4.7630<br>4.5460 | 5.1960<br>4.9590 |
| H  | THICKNESS         | 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          |
|  |                   | MAX.<br>MIN. | .9990<br>.9390   | 1.0940<br>1.0300 | 1.2060<br>1.1380 | 1.3170<br>1.2450 | 1.5400<br>1.4600 | 1.7630<br>1.6750 | 1.9700<br>1.8740 | 2.1930<br>2.0890 | 2.4150<br>2.3030 | 2.6380<br>2.5180 |
| MATERIAL   |                   |              | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      | DASH<br>NO.      |
| STEEL, CORROSION<br>RESISTING                        |                   |              | 11               | 12               | 13               | 14               | 15               | 16               | 17               | 18               | 19               | 20               |

## Requirements:

1. Material: Steel, corrosion resisting, 300 series in accordance with FF-N-836.
2. Protective coating: Passivate in accordance with SAE-AMS-QQ-P-35.
3. Magnetic permeability: These fasteners have a magnetic permeability of 2.0 maximum (air – 1.0) for a field strength of H = 200 Oersteds using a magnetic indicator in accordance with ASTM-E1444.
4. Threads: Threads shall be in accordance with FED-STD-H28/2.
5. Part number: The MS part number consists of the MS number, plus the dash number.  
Example: MS51971-1

## Notes:

1. Unless otherwise specified, all dimensions in inches.
2. In the event of a conflict between the text of this standard and the references cited herein, the text of this standard shall take precedence.

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3. Referenced government (or non-government) documents of the issue listed in that issue of the department of defense index of specifications and standards (DoDISS) specified in the solicitation form a part of this standard to the extent specified herein.
4. Do not use unassigned part numbers.
5. AMS are SAE publications.
7. Changes from previous issue: entire specification revised.

## INTERCHANGEABILITY TABLE

The following nuts covered by dash numbers given in MS35690 are cancelled after the date indicated on the cancellation 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 the superseding drawing is also contained in this table.

TABLE II

| Cancelled<br>MS35690 | Superseding<br>MS51971 | Cancelled<br>MS35690 | Superseding<br>MS51971 | Cancelled<br>MS35690 | Superseding<br>MS51971 |
|----------------------|------------------------|----------------------|------------------------|----------------------|------------------------|
| Dash No.             | Dash No.               | Dash No.             | Dash No.               | Dash No.             | Dash No.               |
| 410                  | 1                      | 1210                 | 8                      | 2810                 | 15                     |
| 510                  | 2                      | 1410                 | 9                      | 3210                 | 16                     |
| 610                  | 3                      | 1610                 | 10                     | 3610                 | 17                     |
| 710                  | 4                      | 1810                 | 11                     | 4010                 | 18                     |
| 810                  | 5                      | 2010                 | 12                     | 4410                 | 19                     |
| 910                  | 6                      | 2210                 | 13                     | 4810                 | 20                     |
| 1010                 | 7                      | 2410                 | 14                     |                      |                        |

## INTERCHANGEABILITY TABLE

The following nuts covered by dash numbers given in MS16203 (Ships) are cancelled after the date indicated on the cancellation 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 III. Interchangeability information regarding part numbers on the superseding drawing is also contained in this table.

TABLE III

| Cancelled<br>MS16203 (Ships) | Superseding<br>MS51971 | Cancelled<br>MS16203 (Ships) | Superseding<br>MS51971 | Cancelled<br>MS16203 (Ships) | Superseding<br>MS51971 |
|------------------------------|------------------------|------------------------------|------------------------|------------------------------|------------------------|
| Dash No.                     | Dash No.               | Dash No.                     | Dash No.               | Dash No.                     | Dash No.               |
| -1                           | -1                     | -5                           | -5                     | -9                           | -10                    |
| -2                           | -2                     | -6                           | -7                     | -10                          | -11                    |
| -3                           | -3                     | -7                           | -8                     | -11                          | -12                    |
| -4                           | -4                     | -8                           | -9                     | -12                          | -14                    |

Custodians:  
Army - AR  
Air Force - 99

Preparing activity:  
DLA - IS

(Project 5310-2007-004)

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 <http://assist.daps.dla.mil>.