

INCH-POUND

MS35690F
8 April 2005
Superseding
MS35690E
29 August 1984

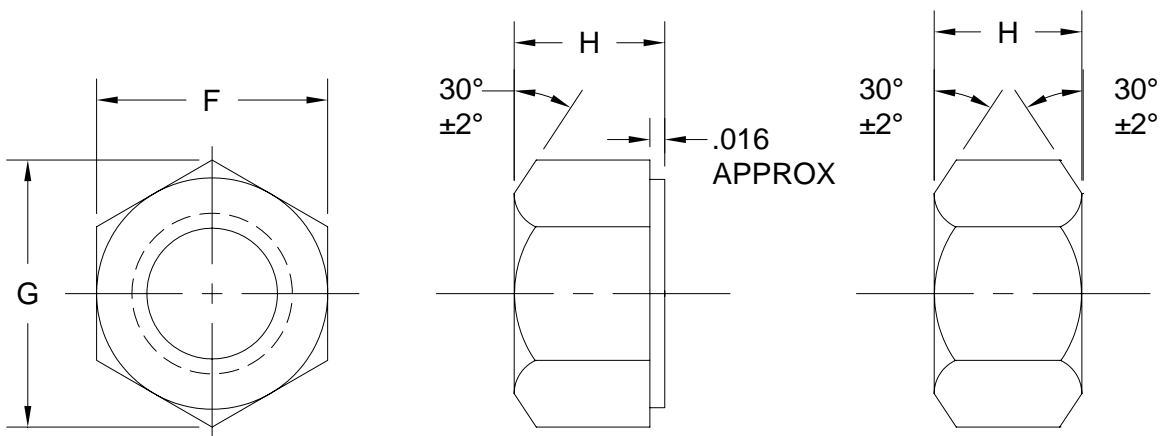
DETAIL SPECIFICATION SHEET

NUT, PLAIN, HEXAGON,
UNC-2B AND UNF-2B

Reactivated after 8 April 2005 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.



OPTIONAL DESIGNS

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TABLE I. DESIGN CONFIGURATIONS.

NOMINAL SIZE OR BASIC MAJOR DIAMETER OF THREAD	WIDTH ACROSS FLATS		WIDTH ACROSS CORNERS		THICKNESS	
	F		G		H	
	MAX	MIN	MAX	MIN	MAX	MIN
1/4 - .2500	.4375	.428	.505	.488	.226	.212
5/16 - .3125	.5000	.489	.577	.557	.273	.258
3/8 - .3750	.5625	.551	.650	.628	.337	.320
7/16 - .4375	.6875	.675	.794	.768	.385	.365
1/2 - .5000	.7500	.736	.866	.840	.448	.427
9/16 - .5625	.8750	.861	1.010	.982	.496	.473
5/8 - .6250	.9375	.922	1.083	1.051	.559	.535
3/4 - .7500	1.1250	1.088	1.299	1.240	.665	.617
7/8 - .8750	1.3125	1.269	1.516	1.447	.776	.724
1 - 1.0000	1.5000	1.450	1.732	1.653	.887	.831
1 1/8 - 1.1250	1.6875	1.631	1.949	1.859	.999	.939
1 1/4 - 1.2500	1.8750	1.812	2.165	2.066	1.094	1.030
1 3/8 - 1.3750	2.0625	1.994	2.382	2.273	1.206	1.138
1 1/2 - 1.5000	2.2500	2.175	2.598	2.480	1.317	1.245
1 3/4 - 1.7500	2.6250	2.538	3.031	2.893	1.540	1.460
2 - 2.0000	3.0000	2.900	3.464	3.306	1.763	1.675
2 1/4 - 2.2500	3.3750	3.262	3.897	3.719	1.970	1.874
2 1/2 - 2.5000	3.7500	3.625	4.330	4.133	2.193	2.089
2 3/4 - 2.7500	4.1250	3.988	4.763	4.546	2.415	2.303
3 - 3.0000	4.5000	4.350	5.196	4.959	2.638	2.518

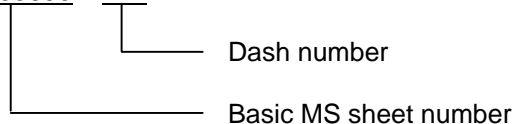
REQUIREMENTS:

- Material: Steel, carbon, in accordance with procurement specification.
Steel, corrosion resistant, types 303 (UNS S30300), 304 (UNS S30400), 305 (UNS S30500), 410 (UNS S41000), 416 (UNS S41600), 430 (UNS S43000) in accordance with ASTM A276 and ASTM A582.
Brass, alloy 462 (UNS C46200) hard or 464 (UNS C46400) half-hard in accordance with ASTM B21.
- Protective coating and surface treatment:
Cadmium plated, in accordance with procurement specification.
Zinc coating, ASTM B633, Fe/Zn5 (5 μ m thick), Type II.
Phosphate coating, MIL-DTL-16232, Type Z, Class 2.
Tin plated, .0001 thick in accordance with ASTM B545, Class A.
Cleaned, descaled and passivated, in accordance with ASTM A380 (see Table IV).
Nickel plated, in accordance with procurement specification (see Table II).
- Threads: Threads shall be in accordance with FED-STD-H28/2. Acceptability of screw threads shall be in accordance with FED-STD-H28/20, System 21.

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4. Part number: The part number consists of the basic MS sheet number, followed by a dash number taken from Table II.

Example: MS35690 – 424



MS35690-424 indicates – Nut, Plain, Hexagon, Thread size .2500-28 UNF-2B; Steel, Carbon, Grade B, Uncoated.

5. Dimensions in inches.
6. Referenced documents shall be of the issue in effect on the date of invitation for bids or request for proposal, except that referenced adopted documents shall give the date of the issue adopted.
7. For design feature proposes, this standard takes precedence over procurement documents referenced herein.
- 8 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.

ACTIVE FOR NEW DESIGN

The following parts are reinstated for design after 27 September 1967.

Table II. Dash Numbers.

Thread Size	.2500-28UNF-2B	.3750-16-UNC-2B	.3750-24-UNF-2B
Material	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	424	604	624
Steel, Carbon, Grade C, Uncoated	427	607	627
Brass, Nickel Plated <u>1/</u>	413	613	633

1/ New dash numbers added for nickel plated brass.

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INACTIVE PART NUMBERS FOR NEW DESIGN

The following parts are inactive for design after 30 September 1965.
Use for maintenance of existing equipment only

Table III.

Thread Size	.2500-20UNC-2B		.3125-18UNC-2B	.3125-24UNF-2B
Material	Dash No.		Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	404		504	524
Steel, Carbon, Grade C, Uncoated	407		507	527
Thread Size	.4375-14UNC-2B	.4375-20UNF-2B	.5000-13UNC-2B	.5000-20UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	704	724	804	824
Steel, Carbon, Grade C, Uncoated	707	727	807	827
Thread Size	.5625-12UNC-2B	.5625-18UNF-2B	.6250-11UNC-2B	.6250-18UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	904	924	1004	1024
Steel, Carbon, Grade C, Uncoated	907	927	1007	1027
Thread Size	.7500-10UNC-2B	.7500-16UNF-2B	.8750-9UNC-2B	.8750-14UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	1204	1224	1404	1424
Steel, Carbon, Grade C, Uncoated	1207	1227	1407	1427
Thread Size	1.0000-8UNC-2B	1.0000-12UNF-2B	1.1250-7UNC-2B	1.1250-12UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	1604	1624	1804	1824
Steel, Carbon, Grade C, Uncoated	1607	1627	1807	1827
Thread Size	1.2500-7UNC-2B	1.2500-12UNF-2B	1.3750-6UNC-2B	1.3750-12UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	2004	2024	2204	2224
Steel, Carbon, Grade C, Uncoated	2007	2027	2207	2227
Thread Size	1.5000-6UNC-2B	1.5000-12UNF-2B	1.7500-5UNC-2B	2.0000-4.5UNC-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	2404	2424	2804	3204
Steel, Carbon, Grade C, Uncoated	2704	2427	2807	3207
Thread Size	2.2500-4.5UNC-2B	2.5000-4UNC-2B	2.7500-4UNC-2B	3.0000-4UNC-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade B, Uncoated	3604	4004	4404	4804
Steel, Carbon, Grade C, Uncoated	3607	4007	4407	4807

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CANCELLED PART NUMBERS

The following parts are cancelled for design after 30 September 1965. For interchangeability see Tables V and VI of this standard and MS51967 thru MS51972.

Table IV.

Thread Size	.2500-20UNC-2B	.2500-28UNF-2B	.3125-18UNC-2B	.3125-24UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	401	421	501	521
CAD or Zinc optional	402	422	502	522
Phosphate	403	423	503	523
Steel, Carbon, Grade B, CAD or Zinc optional	405	425	505	525
Phosphate	405	426	506	526
Steel, Carbon, Grade C, CAD or Zinc optional	408	428	508	528
Phosphate	409	429	509	529
Steel, CRES Passivated	410	430	510	530
Brass Uncoated	411	431	511	531
Tin plated	412	432	512	532
Thread Size	.3750-16UNC-2B	.3750-24UNF-2B	.4375-14UNC-2B	.4375-20UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	601	621	701	
CAD or Zinc optional	602	622	702	721
Phosphate	603	623	703	722 723
Steel, Carbon, Grade B, CAD or Zinc optional	605	625	705	725
Phosphate	606	626	706	726
Steel, Carbon, Grade C, CAD or Zinc optional	608	628	708	728
Phosphate	609	629	709	729
Steel, CRES Passivated	610	630	710	730
Brass Uncoated	611	631	711	731
Tin plated	612	632	---	---
Thread Size	.5000-13UNC-2B	.5000-20UNF-2B	.5625-12UNC-2B	.5625-18UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	801	821	901	921
CAD or Zinc optional	802	822	902	922
Phosphate	803	823	903	923
Steel, Carbon, Grade B, CAD or Zinc optional	805	825	905	925
Phosphate	806	826	906	926
Steel, Carbon, Grade C, CAD or Zinc optional	808	828	908	928
Phosphate	809	829	909	929
Steel, CRES Passivated	810	830	910	930
Brass Uncoated	811	831	911	931

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Table IV – Continued

Thread Size	.6250-11UNC-2B	.6250-18UNF-2B	.7500-10UNC-2B	.7500-16UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	1001	1021	1201	1221
CAD or Zinc optional	1002	1022	1202	1222
Phosphate	1003	1023	1203	1223
Steel, Carbon, Grade B, CAD or Zinc optional	1005	1025	1205	1225
Phosphate	1006	1026	1206	1226
Steel, Carbon, Grade C, CAD or Zinc optional	1008	1028	1208	1228
Phosphate	1009	1029	1209	1229
Steel, CRES Passivated	1010	1030	1210	1230
Brass Uncoated	1011	1031	1211	1231
Thread Size	.8750-9UNC-2B	.8750-14UNF-2B	1.0000-8UNC-2B	1.0000-12UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	1401	1421	1601	1621
CAD or Zinc optional	1402	1422	1602	1622
Phosphate	1403	1423	1603	1623
Steel, Carbon, Grade B, CAD or Zinc optional	1405	1425	1605	1625
Phosphate	1406	1426	1606	1626
Steel, Carbon, Grade C, CAD or Zinc optional	1408	1428	1608	1628
Phosphate	1409	1429	1609	1629
Steel, CRES Passivated	1410	1430	1610	1630
Brass Uncoated	1411	1431	1611	1631
Thread Size	1.1250-7UNC-2B	1.1250-12UNF-2B	1.2500-7UNC-2B	1.2500-12UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	1801	1821	2001	2021
CAD or Zinc optional	1802	1822	2002	2022
Phosphate	1803	1823	2003	2023
Steel, Carbon, Grade B, CAD or Zinc optional	1805	1825	2005	2025
Phosphate	1806	1826	2006	2026
Steel, Carbon, Grade C, CAD or Zinc optional	1808	1828	2008	2028
Phosphate	1809	1829	2009	2029
Steel, CRES Passivated	1810	1830	2010	2030
Brass Uncoated	1811	1831	2011	2031

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Table IV – Continued

Thread Size	1.3750-6UNC-2B	1.3750-12UNF-2B	1.5000-6UNC-2B	1.5000-12UNF-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	2201	2221	2401	2421
CAD or Zinc optional	2202	2222	2402	2422
Phosphate	2203	2223	2403	2423
Steel, Carbon, Grade B, CAD or Zinc optional	2205	2225	2405	2425
Phosphate	2206	2226	2406	2426
Steel, Carbon, Grade C, CAD or Zinc optional	2208	2228	2408	2428
Phosphate	2209	2229	2409	2429
Steel, CRES Passivated	2210	2230	2410	2430
Brass Uncoated	2211	2231	2411	2431
Thread Size	1.7500-5UNC-2B	2.0000-4.5UNC-2B	2.2500-4.5UNC-2B	2.5000-4UNC-2B
Material	Dash No.	Dash No.	Dash No.	Dash No.
Steel, Carbon, Grade A, Uncoated	2801	3201	3601	4001
CAD or Zinc optional	2802	3202	3602	4002
Phosphate	2803	3203	3603	4003
Steel, Carbon, Grade B, CAD or Zinc optional	2805	3205	3605	4005
Phosphate	2806	3206	3606	4006
Steel, Carbon, Grade C, CAD or Zinc optional	2808	3208	3608	4008
Phosphate	2809	3209	3609	4009
Steel, CRES Passivated	2810	3210	3610	4010
Brass Uncoated	2811	3211	3611	4011
Thread Size	2.7500-4UNC-2B	3.0000-4UNC-2B		
Material	Dash No.	Dash No.		
Steel, Carbon, Grade A, Uncoated	4401	4801		
CAD or Zinc optional	4402	4802		
Phosphate	4403	4803		
Steel, Carbon, Grade B, CAD or Zinc optional	4405	4805		
Phosphate	4406	4806		
Steel, Carbon, Grade C, CAD or Zinc optional	4408	4808		
Phosphate	4409	4809		
Steel, CRES Passivated	4410	4810		
Brass Uncoated	4411	4811		

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INACTIVE PART NUMBERS FOR NEW DESIGN

After 30 September 1965, the following canceled nuts are superseded by the inactivated nuts indicated below. However, the canceled nuts should be used until existing stocks are depleted. Then use the superseding inactivated nuts for maintenance purposes only. For new design and engineering use MS51967 thru MS51972.

Table V. Interchangeability table of canceled and superseding part numbers.

Part Numbers		Part Numbers		Part Numbers	
Canceled	Superseded by	Canceled	Superseded by	Canceled	Superseded by
MS35690-401	MS35690-404	MS35690-1001	MS35690-1004	MS35690-2021	MS35690-2024
-501	-504	-1021	-1024	-2201	-2204
-521	-524	-1201	-1204	-2221	-2224
-701	-704	-1221	-1224	-2401	-2404
-721	-724	-1401	-1404	-2421	-2424
-801	-804	-1421	-1424	-2801	-2804
-821	-824	-1601	-1604	-3201	-3204
-901	-904	-1621	-1624	-3601	-3604
-921	-924	-1801	-1804	-4001	-4004
		-1821	-1824	-4401	-4404
		-2001	-2004	-4801	-4804

The following canceled nuts are superseded by the reinstated nuts indicated below.

Table VI. Interchangeability table of canceled and superseding part numbers.

Part Numbers		Part Numbers		Part Numbers	
Canceled	Superseded by	Canceled	Superseded by	Canceled	Superseded by
MS35690-421	MS35690-424	MS35690-601	MS35690-604	MS35690-621	MS35690-624
	-427		-607		-627

MILITARY INTEREST

Custodians:

Navy - SH
Air Force - 99

Preparing activity:
DLA - IS

(Project 5310-2721)

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>.