

OPTIONAL DESIGNS

TABLE I. DESIGN CONFIGURATIONS

NOMINAL SIZE OR BASIC MAJOR DIAMETER OF THREAD	WIDTH ACROSS FLATS P		WIDTH ACROSS CORNERS G		THICKNESS H	
	MAX	MIN	MAX	MIN	MAX	MIN
	1/4 - .2500	.4375	.428	.505	.488	.226
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	.395	.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

USER ACTIVITIES:  
ARMY - AT, MI  
NAVY - MC  
NSA - NS

REVIEWER ACTIVITIES:  
ARMY - AV, EA  
AIR FORCE - 82  
DLA - IS

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ⓔ ENTIRE STANDARD REVISED

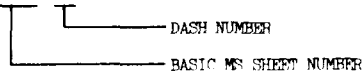
P.A. Other Cust	AR 99	INTERNATIONAL INTEREST	TITLE NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B	MILITARY STANDARD MS35690
PROCUREMENT SPECIFICATION FF-N-836	SUPERSEDES:		PAGE 1	OF 7

APPROVED 12 MAR 56 REVISED 29 AUG 84

REQUIREMENTS:

1. 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 A276-83 AND ASTM A582-80. BRASS, ALLOY 462 (UNS C46200) HARD OR 464 (UNS C46400) HALF-HARD IN ACCORDANCE WITH QQ-B-637.
2. PROTECTIVE COATING AND SURFACE TREATMENT. CADMIUM PLATED, IN ACCORDANCE WITH PROCUREMENT SPECIFICATION. ZINC COATING, ASTM B633-78, Fe/Zn5 (5 um THICK), TYPE II. PHOSPHATE COATING, DOD-P-16232, TYPE Z, CLASS 2. TIN PLATED, MIL-T-10727, TYPE I OR II; .0001 THICK IN ACCORDANCE WITH ASTM B545-83. CLEANED, DESCALED AND PASSIVATED, IN ACCORDANCE WITH ASTM A380-78 (SEE TABLE IV). NICKEL PLATED IN ACCORDANCE WITH PROCUREMENT SPECIFICATION (SEE TABLE II).
3. 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.
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 .250-28 UNF-2B; STEEL, CARBON, GRADE B, UNCOATED.

NOTES:

1. DIMENSIONS ARE IN INCHES.
2. REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATIONS FOR BIDS OR REQUEST FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.
3. FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.

**ACTIVE FOR NEW DESIGN**

THE FOLLOWING PARTS ARE REINSTATED FOR DESIGN AFTER 27 SEP 1967.

TABLE II. DASH NUMBERS

THREAD SIZE	.250-28UNF-2B	.375-16UNC-2B	375-24UNF-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 1/	413	613	633

1/ NEW DASH NUMBERS ADDED FOR NICKEL PLATED BRASS.

USER ACTIVITIES:  
ARMY-AT,MI  
NAVY-MC  
NSA-NS

REVIEWER ACTIVITIES:  
ARMY-AT,EA  
AIR FORCE-82  
DLA-1S

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APPROVED 12 MAR 56 REVISED (E) FOR CHANGES SEE PAGES 1 THRU 7

P.A. AR Other Cust 99	INTERNATIONAL INTEREST	TITLE <b>NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B</b>	<b>MILITARY STANDARD</b> <b>MS35690</b>
PROCUREMENT SPECIFICATION <b>FF-N-836</b>	SUPERSEDES	PAGE 2 OF 7	

**INACTIVE PART NUMBERS FOR NEW DESIGN**

THE FOLLOWING PART NUMBERS ARE INACTIVE FOR NEW DESIGN AFTER 30 SEP 1965  
USE FOR MAINTENANCE OF EXISTING EQUIPMENT ONLY.

TABLE III

THREAD SIZE	.250-2UNC-2B		.3125-1BUNC-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	.500-13UNC-2B	.500-20UNF-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	.625-11UNC-2B	.625-18UNF-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	.750-10UNC-2B	.750-16UNF-2B	.875-9UNC-2B	.875-14UNF-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	1.000-8UNC-2B	1.000-12UNF-2B	1.125-7UNC-2B	1.125-12UNF-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	1.250-7UNC-2B	1.250-12UNF-2B	1.375-6UNC-2B	1.375-12UNF-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	1.500-6UNC-2B	1.500-12UNF-2B	1.750-5UNC-2B	2.000-4-1/2UNC-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	2.250-4-1/2UNC-2B	2.500-4UNC-2B	2.750-4UNC-2B	3.000-4UNC-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

USER ACTIVITIES:  
ARMY - AT, MI  
NAVY - MC  
NSA - NS

REVIEWER ACTIVITIES:  
ARMY - AT, EA  
AIR FORCE - 82  
DLA - IS

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P.A.	AR	INTERNATIONAL INTEREST	TITLE	MILITARY STANDARD
Other Cust	99		NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B	MS35690
PROCUREMENT SPECIFICATION	FF-N-836	SUPERSEDES:	PAGE 3	OF 7

FED. SUP CLASS  
5310**CANCELLED PART NUMBERS**THE FOLLOWING PART NUMBERS ARE CANCELLED AFTER 30 SEP 1965. FOR INTERCHANGEABILITY  
SEE TABLES V AND VI OF THIS STANDARD AND MS51967 THRU MS51972.

TABLE IV

THREAD SIZE	.250-20UNC-2B	.250-28UNF-2B	.3125-18UNC-2B	.3125-24UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	401 402 403	421 422 423	501 502 503	521 522 523
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	405 406	425 426	505 506	525 526
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	408 409	428 429	508 509	528 529
STEEL, CRCS PASSIVATED	410	430	510	530
BRASS UNCOATED TIN PLATED	411 412	431 432	511 512	531 532
THREAD SIZE	.375-16UNC-2B	.375-24UNF-2B	.4375-14UNC-2B	.4375-20UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	601 602 603	621 622 623	701 702 703	721 722 723
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	605 606	625 626	705 706	725 726
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	608 609	628 629	708 709	728 729
STEEL, CRCS PASSIVATED	610	630	710	730
BRASS UNCOATED TIN PLATED	611 612	631 632	711 —	731 —
THREAD SIZE	.500-13UNC-2B	.500-20UNF-2B	.5625-12UNC-2B	.5625-18UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	801 802 803	821 822 823	901 902 903	921 922 923
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	805 806	825 826	905 906	925 926
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	808 809	828 829	908 909	928 929
STEEL, CRCS PASSIVATED	810	830	910	930
BRASS UNCOATED	811	831	911	931

USER ACTIVITIES:  
ARMY-AT, MI  
NAVY-MC  
NSA-NSREVIEWER ACTIVITIES:  
ARMY-AT, EA  
AIR FORCE-82  
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P.A. AR	INTERNATIONAL INTEREST	TITLE <b>NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B</b>	<b>MILITARY STANDARD</b>
Other Cust 99			<b>MS35690</b>
PROCUREMENT SPECIFICATION FF-N-836	SUPERSEDES:		PAGE 4 OF 7

**CANCELLED PART NUMBERS**

THE FOLLOWING PART NUMBERS ARE CANCELLED AFTER 30 SEP 1965. FOR INTERCHANGEABILITY SEE TABLES V AND VI OF THIS STANDARD AND MS51967 THRU MS51972.

TABLE IV - CONTINUED

THREAD SIZE	.625-11UNC-2B	.625-18UNF-2B	.750-10UNC-2B	.750-16UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	1001 1002 1003	1021 1022 1023	1201 1202 1203	1221 1222 1223
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	1005 1006	1025 1026	1205 1206	1225 1226
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	1008 1009	1028 1029	1208 1209	1228 1229
STEEL, CRES PASSIVATED	1010	1030	1210	1230
BRASS UNCOATED	1011	1031	1211	1231
THREAD SIZE	.875-9UNC-2B	.875-14UNF-2B	1.000-8UNC-2B	1.000-12UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	1401 1402 1403	1421 1422 1423	1601 1602 1603	1621 1622 1623
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	1405 1406	1425 1426	1605 1606	1625 1626
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	1408 1409	1428 1429	1608 1609	1628 1629
STEEL, CRES PASSIVATED	1410	1430	1610	1630
BRASS UNCOATED	1411	1431	1611	1631
THREAD SIZE	1.125-7UNC-2B	1.125-12UNF-2B	1.250-7UNC-2B	1.250-12UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	1801 1802 1803	1821 1822 1823	2001 2002 2003	2021 2022 2023
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	1805 1806	1825 1826	2005 2006	2025 2026
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	1808 1809	1828 1829	2008 2009	2028 2029
STEEL, CRES PASSIVATED	1810	1830	2010	2030
BRASS UNCOATED	1811	1831	2011	2031

USER ACTIVITIES:  
ARMY - AT, MI  
NAVY - MC  
NSA - NS

REVIEWER ACTIVITIES:  
ARMY - AT, EA  
AIR FORCE - 82  
DLA - IS

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P.A. Other Cust	AR 99	INTERNATIONAL INTEREST	TITLE NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B	MILITARY STANDARD MS35690
PROCUREMENT SPECIFICATION FF-N-836	SUPERSEDES	PAGE 5	OF 7	

FED SUP CLASS  
5310**CANCELLED PART NUMBERS**THE FOLLOWING PART NUMBERS ARE CANCELLED AFTER 30 SEP 1965, FOR INTERCHANGEABILITY  
SEE TABLES V AND VI OF THIS STANDARD AND MS1967 (REV) MS1972.

TABLE IV - CONTINUED

THREAD SIZE	1.375-6UNC-2B	1.375-12UNF-2B	1.500-6UNC-2B	1.500-12UNF-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	2201	2221	2401	2421
	2202	2222	2402	2422
	2203	2223	2403	2423
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	2205	2225	2405	2425
	2206	2226	2406	2426
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	2208	2228	2408	2428
	2209	2229	2409	2429
STEEL, CRYST PASSIVATED	2210	2230	2410	2430
BRASS UNCOATED	2211	2231	2411	2431
THREAD SIZE	1.750-5UNC-2B	2.000-4-1/2UNC-2B	2.250-4-1/2UNC-2B	2.500-4UNC-2B
MATERIAL	DASH NO	DASH NO	DASH NO	DASH NO
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	2801	3201	3601	4001
	2802	3202	3602	4002
	2803	3203	3603	4003
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	2805	3205	3605	4005
	2806	3206	3606	4006
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	2808	3208	3608	4008
	2809	3209	3609	4009
STEEL, CRYST PASSIVATED	2810	3210	3610	4010
BRASS UNCOATED	2811	3211	3611	4011
THREAD SIZE	2.750-4UNC-2B	3.000-4UNC-2B		
MATERIAL	DASH NO	DASH NO		
STEEL, CARBON, GRADE A UNCOATED CAD OR ZINC OPTIONAL PHOSPHATE	4401	4801		
	4402	4802		
	4403	4803		
STEEL, CARBON, GRADE B CAD OR ZINC OPTIONAL PHOSPHATE	4405	4805		
	4406	4806		
STEEL, CARBON, GRADE C CAD OR ZINC OPTIONAL PHOSPHATE	4408	4808		
	4409	4809		
STEEL, CRYST PASSIVATED	4410	4810		
BRASS UNCOATED	4411	4811		

USER ACTIVITIES:  
ARMY-AT, MI  
NAVY-MC  
NSA-NSREVIEWER ACTIVITIES:  
ARMY-AT, EA  
AIR FORCE-82  
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P.A. Other Cust	AR 99	INTERNATIONAL INTEREST	TITLE <b>NUT, PLAIN, HEXAGON, UNC-2B AND UNF-2B</b>	<b>MILITARY STANDARD MS35690</b>
PROCUREMENT SPECIFICATION FF-N-836	SUPERSEDES		PAGE 6	OF 7.

### INACTIVE PART NUMBERS FOR NEW DESIGN

AFTER 30 SEP 1965, THE FOLLOWING CANCELLED NUTS ARE SUPERSEDED BY THE INACTIVATED NUTS INDICATED BELOW. HOWEVER, THE CANCELLED 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 CANCELLED AND SUPERSEDING PART NUMBERS

PART NUMBERS		PART NUMBERS		PART NUMBERS	
CANCELLED	SUPERSEDED BY	CANCELLED	SUPERSEDED BY	CANCELLED	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 CANCELLED NUTS ARE SUPERSEDED BY THE REINSTATED NUTS INDICATED BELOW.

TABLE VI. INTERCHANGEABILITY TABLE OF CANCELLED AND SUPERSEDING PART NUMBERS

PART NUMBERS		PART NUMBERS		PART NUMBERS	
CANCELLED	SUPERSEDED BY	CANCELLED	SUPERSEDED BY	CANCELLED	SUPERSEDED BY
MS35690-421	MS35690-424	MS35690-601	MS35690-604	MS35690-621	MS35690-624
	-427		-607		-627

USER ACTIVITIES:  
ARMY-AT, M  
NAVY-MC  
NSA-NS

REVIEWER ACTIVITIES:  
ARMY-AT, EA  
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DLA-IS

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PROCUREMENT SPECIFICATION FF-N-836	SUPERSEDES:		PAGE 7 OF 7.	

