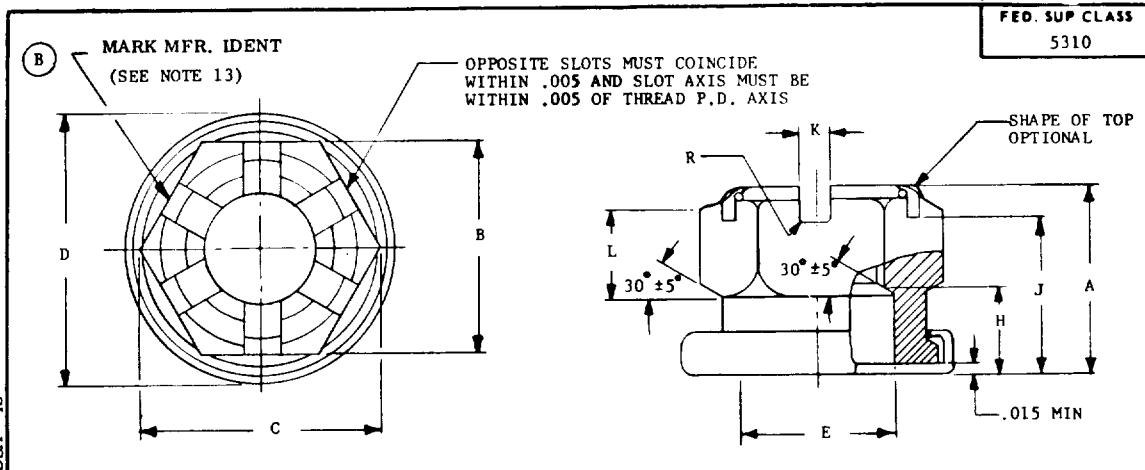


PROJECT NO. 5310-0876

FED. SUP CLASS  
5310

USER SYMBOLS:

REVIEWER SYMBOLS:

NAVY - AS  
USAF - 11  
ARMY - AV, EL  
DSA - IS

\*Review/user information is current as of the date of this document.  
For future coordination of changes to this document, draft circulation  
should be based on the information in the current DOBIS.

This military standard is approved for use by all Departments  
& Agencies of the Department of Defense. Selection for all new  
engineering and design applications and for repetitive use shall  
be made from this document.

SIZE DASH NO. 	(b) - THREADS PER MIL-S-8879	A		B		C	D		(c) E (d)		H	
		MAX	MIN	MAX	MIN	MIN	MAX	MIN	MAX	MIN	MAX	MIN
-3	.1900-32UNJF-3B	.374	.334	.376	.367	.413	.490	.460	.240	.230	.161	.141
-4	.2500-28UNJF-3B	.405	.365	.439	.430	.488	.560	.530	.309	.299	.192	.172
-5	.3125-24UNJF-3B	.436	.396	.502	.492	.557	.640	.610	.395	.385	.223	.203
-6	.3750-24UNJF-3B	.482	.442	.564	.553	.628	.710	.680	.460	.450	.238	.218
-7	.4375-20UNJF-3B	.513	.473	.627	.616	.698	.785	.755	.529	.519	.269	.249
-8	.5000-20UNJF-3B	.576	.536	.752	.741	.840	.925	.895	.614	.604	.301	.281
-9	.5625-18UNJF-3B	.670	.630	.877	.865	.988	1.080	1.050	.686	.676	.332	.312
-10	.6250-18UNJF-3B	.822	.792	1.002	.990	1.121	1.224	1.194	.770	.760	.407	.387
-12	.7500-16UNJF-3B	.951	.911	1.064	1.052	1.191	1.283	1.253	.915	.905	.450	.430
-14	.8750-14UNJF-3B	1.058	1.018	1.252	1.239	1.403	1.495	1.465	1.065	1.055	.495	.475
-16	1.0000-12UNJF-3B	1.202	1.162	1.440	1.427	1.615	1.707	1.677	1.215	1.205	.544	.524

SIZE DASH NO. 	J		K		L	R	X WRENCH TORQUE CAPABILITY	Y INSTL. TORQUE	Z LOCKING TORQUE	ULTIMATE TENSILE STRENGTH (a)	WEIGHT
	MAX	MIN	MAX	MIN	MIN	MAX	MIN IN-LB	MAX IN-LB	MAX IN-LB	LBS MIN	LB/100 MAX
- 3	.279	.259	.108	.070	.110	.035	30	20	9	1,000	.91
- 4	.316	.296					65	45	15	1,800	1.20
- 5	.347	.327					115	90	25	2,900	1.50
- 6	.378	.358	.155	.125	.140	.053	200	125	40	4,100	1.90
- 7	.409	.389					300	225	50	5,000	2.17
- 8	.472	.452					375	300	75	5,600	3.60
- 9	.550	.530	.187	.157	.165	.062	500	400	100	7,800	6.20
-10	.633	.613					750	600	150	10,000	6.90
-12	.765	.745					1400	1100	200	15,500	7.60
-14	.871	.851					2400	1900	300	22,800	13.70
-16	.984	.964					3800	3000	400	35,500	17.10

(B) ENTIRE STANDARD REVISED

FOR NOTES SEE SHEET 2.

P. A.  
NAVY - AS  
Other Cust  
USAF - 11  
ARMY - AVINTER-  
NATIONAL  
INTEREST  
\*\*

TITLE

NUT, SELF-LOCKING, CASTELLATED, HEXAGON,  
COUNTERBORED, ASSEMBLED WASHER, 250°F, NON-  
METALLIC INSERT (FOR SELF RETAINING BOLTS)

MILITARY STANDARD

MS21224

PROCUREMENT SPECIFICATION  
\*MIL-N-25027SUPERSEDES:  
MS21224 (ASG)

SHEET 1 OF 2

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

PLATE NO. 23085

APPROVED 12 JAN 68 REVISED A 28 SEP 73 (B) 15 APR 74

FED. SUP CLASS  
5310

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REVIEWER SYMBOLS:  
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engineering and design applications and for repetitive use shall  
be made from this document.

- (a) ULTIMATE AXIAL STRENGTHS ARE NOT IN ACCORDANCE WITH MIL-N-25027.  
(b) NUTS WILL ASSEMBLE ON EITHER MIL-S-7742 OR MIL-S-8879 THREADED BOLTS.  
(c) CONCENTRICITY: "E" TO BE CONTRIC TO P.D. OF THREAD WITHIN .005 TIR.  
(d) WASHER I.D. MAY BE .005 LESS THAN "E" MIN.

**NOTES:**

1. MATERIAL: a. BODY: STEEL (SEE PROCUREMENT SPECIFICATION.); CRES (A286)  
b. WASHER: ALUMINUM ALLOY, 2024-T4 OR 7075-T6.  
c. INSERT: NYLON OR EQUIVALENT
2. PROTECTIVE TREATMENT: a. NUT-CADMIUM PLATING IN ACCORDANCE WITH QQ-P-416,  
TYPE II, CLASS 2. PARTS WITH CLASS 3 PLATING MAY  
BE FURNISHED FROM SUPPLIER'S STOCK UNTIL JUNE 1975.  
b. WASHER-ALODINE MIL-C-5541.
3. THREADED ELEMENT SHALL ROTATE FREELY IN AND AGAINST THE WASHER.
- \* 4. PERFORMANCE: PER MIL-N-25027 EXCEPT FOR:  
VIBRATION TIME FOR NUT SIZES .3125 AND LARGER SHALL BE 120 MINUTES  
MINIMUM.  
LOCKING TORQUE VALUES APPLICABLE FOR ONLY ONE CYCLE AT ROOM  
TEMPERATURE.  
SEE (a) AND COLUMNS X, Y & Z OF TABLE.
5. SURFACE TEXTURE IN ACCORDANCE WITH ANSI-B46.1 SHALL NOT EXCEED 125 MICROINCHES.
6. BREAK ALL SHARP EDGES AND REMOVE BURRS AND SLIVERS.
7. DIMENSIONS IN INCHES. UNLESS OTHERWISE SPECIFIED, TOLERANCE: DECIMALS  $\pm .010$ .
8. DESIGN INFORMATION: THESE NUTS ARE FOR USE WITH SELF-RETAINING BOLTS AND MAY  
BE USED AT TEMPERATURES 250°F AND BELOW. FOR DESIGN USAGE  
LIMITATIONS SEE MS33602. NUTS ARE TO BE INSTALLED IN  
ACCORDANCE WITH MS33540.
9. QUALIFIED PRODUCTS: ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON  
QPL-25027 SHALL BE USED FOR DESIGN.
10. EXAMPLE OF PART NUMBER: MS21224-4 = .2500-28 STEEL, CADMIUM PLATED, ASSEMBLED  
WASHER, ALUMINUM, ALODINE TREATED, INSERT, NON-  
METALLIC.
- △ 11. ADD "C" AFTER DASH NUMBER TO INDICATE CRES.
12. MAGNETIC PERMEABILITY OF CRES NUTS SHALL BE LESS THAN 2.0 (AIR = 1.0) FOR A FIELD  
STRENGTH H = 200 OERSTEDS USING A MAGNETIC PERMEABILITY INDICATOR IN ACCORDANCE  
WITH MIL-I-17214 OR EQUAL.
- \*\* CERTAIN PROVISIONS FOR ACROSS FLAT DIMENSIONS OF THIS STANDARD ARE THE SUBJECT OF  
INTERNATIONAL STANDARDIZATION AGREEMENT (ABC AIR STD 17/2). WHEN REVISION, OR  
CANCELLATION OF THIS STANDARD IS PROPOSED WHICH WILL AFFECT OR VIOLATE THE INTER-  
NATIONAL AGREEMENT CONCERNED, THE PREPARING ACTIVITY WILL TAKE APPROPRIATE RECONCIL-  
IATION ACTION THROUGH INTERNATIONAL STANDARDIZATION CHANNELS, INCLUDING DEPART-  
MENTAL STANDARDIZATION OFFICES, IF REQUIRED.
- ⓑ 13. PARTS WITHOUT MFR IDENT MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL DEC 31, 1975.

FOR DESIGN FEATURE PURPOSES, THIS STANDARD TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS REFERENCED HEREIN.  
REFERENCED DOCUMENTS SHALL BE OF THE ISSUE IN EFFECT ON DATE OF INVITATION FOR BIDS.

P. A. NAVY - AS Other Cust	INTER- NATIONAL INTEREST **	TITLE NUT, SELF-LOCKING, CASTELLATED, HEXAGON, COUNTERBORED ASSEMBLED WASHER, 250°F, NON- METALLIC INSERT (FOR SELF RETAINING BOLTS)	MILITARY STANDARD <b>MS21224</b>
USAF-11 ARMY-AV		PROCUREMENT SPECIFICATION * MIL-N-25027	SHEET 2 OF 2
		SUPERSEDES MS21224 (ASG)	

DD FORM 672-1 (Coordinated)  
1 MAR 72

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

PLATE NO 23065

☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-713-154/5336

APPROVED 12 JAN 68  
REVISED  
ⓑ SEE SHEETS 1 & 2

