

USER SYMBOLS:

REVIEWER SYMBOLS:

NAVY - AS
ARMY - AR, ER
DLA - IS

AMSC N/A
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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.

MARK MFR. IDENT (POSITION OPTIONAL) (C)		OPPOSITE SLOTS MUST COINCIDE WITHIN .005 AND SLOT AXIS MUST BE WITHIN .005 OF THREAD P.D. AXIS		SHAPE OF TOP OPTIONAL	

SIZE DASH NO. △	(b) THREADS PER MIL-S-8879	A (C)		B		C	D		(c) E (d)		H	
		MAX	MIN	MAX	MIN	MIN	MAX	MIN	MAX	MIN	MAX	MIN
-3	.1900-32UNJF-3B	.374	.344	.376	.367	.413	.490	.460	.240	.230	.161	.141
-4	.2500-28UNJF-3B	.405	.375	.439	.430	.488	.560	.530	.309	.299	.192	.172
-5	.3125-24UNJF-3B	.436	.406	.502	.492	.557	.640	.610	.395	.385	.223	.203
-6	.3750-24UNJF-3B	.482	.452	.564	.553	.628	.710	.680	.460	.450	.238	.218
-7	.4375-20UNJF-3B	.513	.483	.627	.616	.698	.785	.755	.529	.519	.269	.249
-8	.5000-20UNJF-3B	.576	.546	.752	.741	.840	.925	.895	.614	.604	.301	.281
-9	.5625-18UNJF-3B	.670	.640	.877	.865	.988	1.080	1.050	.686	.676	.332	.312
-10	.6250-18UNJF-3B	.822	.802	1.002	.990	1.121	1.224	1.194	.770	.760	.407	.387
-12	.7500-16UNJF-3B	.951	.921	1.064	1.052	1.191	1.283	1.253	.915	.905	.450	.430
-14	.8750-14UNJF-3B	1.058	1.028	1.252	1.239	1.403	1.495	1.465	1.065	1.055	.495	.475
-16	1.0000-12UNJF-3B	1.202	1.172	1.440	1.427	1.615	1.707	1.677	1.215	1.205	.544	.524

SIZE DASH NO. △	J		K		L	R	X WRENCHING AND VIBRATION TORQUE	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			.125		65	45	15	1,800	1.20
-5	.347	.327			.125		115	90	25	2,900	1.50
-6	.378	.358	.155	.125	.140	.053	200	125	40	4,100	1.90
-7	.409	.389			.150		300	225	50	5,000	2.17
-8	.472	.452			.165		375	300	75	5,600	3.60
-9	.550	.530	.187	.157	.170	.062	500	400	100	7,800	6.20
-10	.633	.613			.220		750	600	150	10,000	6.90
-12	.765	.745			.288		1400	1100	200	15,500	7.60
-14	.871	.851	.333				2400	1900	300	22,800	13.70
-16	.984	.964					3800	3000	400	35,500	17.10

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 INVITATIONS FOR BIDS, OR REQUEST FOR PROPOSAL, EXCEPT THAT REFERENCED ADOPTED INDUSTRY DOCUMENTS SHALL GIVE THE DATE OF THE ISSUE ADOPTED.

(C) DENOTES CHANGES FOR NOTES SEE SHEET 2.

P.A. NAVY - AS Other Cust USAF - 99 ARMY - AV	INTER- 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-25027		SUPERSEDES MS21224 (ASC)	PAGE 1 OF 2

APPROVED 12 JAN 68
REVISED A 28 SEP 73 B 15 APR 74 C 30 NOV 88

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FED. SUP CLASS
5310

- (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 CONCENTRIC TO P.D. OF THREAD WITHIN .005 TIR.
(d) WASHER I.D. MAY BE .005 LESS THAN "E" MIN.

NOTES

- (C) 1. MATERIALS: BODY - STEEL UNS G11370 (AISI 1137) PER AMS 5024
UNS G11374 PER AMS 5020
UNS G87400 (AISI 8740) PER AMS 6322, 6323, 6325, 6327, and 6358
CRES A286 (UNS S66286) PER AMS 5525 OR AMS 5532
WASHER - ALUMINUM ALLOY 2024-T4 PER QQ-A-225 and 7075 T6 PER QQ-A-250
INSERT - NYLON OR EQUIVALENT
2. PROTECTIVE TREATMENT: a. NUT-CADMIUM PLATING IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2. ~~PARTS WITH CLASS 2 PLATING MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL JUNE 1975.~~ (C)
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:
(C) VIBRATION TEST PER MIL-STD-1312-7 USING ASSEMBLY TORQUE VALUES LISTED IN COLUMN X FOR ONE SEATED CYCLE.
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 INTERNATIONAL AGREEMENT CONCERNED, THE PREPARING ACTIVITY WILL TAKE APPROPRIATE RECONCILIATION ACTION THROUGH INTERNATIONAL STANDARDIZATION CHANNELS, INCLUDING DEPARTMENTAL STANDARDIZATION OFFICES, IF REQUIRED.
- (C) 13. ~~PARTS WITHOUT MFR IDENT MAY BE FURNISHED FROM SUPPLIER'S STOCK UNTIL DEC 31, 1975.~~
- (C) BIDS SHALL BE SOLICITED ONLY FROM THE MANUFACTURERS OR DISTRIBUTORS LISTED ON QPL-25027.

APPROVED 12 JAN 68 REVISED (C) FOR CHANGES SEE SHEETS 1 AND 2

P.A. NAVY - AS Other Cust USAF - 99 ARMY - AV	INTER- 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-25027		SUPERSEDES MS21224 (ASG)	SHEET 2 OF 2	

DD FORM 672-1 (Coordinated)

PREVIOUS EDITIONS OF THIS FORM ARE OBSOLETE

PLATE NO. 41065