

THE REQUIREMENTS FOR ACQUIRING THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DODDS SPECIFIED IN THE SOLICITATION: MIL-N-25027

THIS SPECIFICATION IS APPROVED FOR USE BY ALL DEPARTMENTS AND AGENCIES OF THE DEPARTMENT OF DEFENSE.

Form Approved
OMB No. 0704-0188

CONFIGURATION OF NUT OPTIONAL WITHIN THE LIMITATIONS IMPOSED BY DIM'S AND REQUIREMENTS AS SPECIFIED HEREIN.

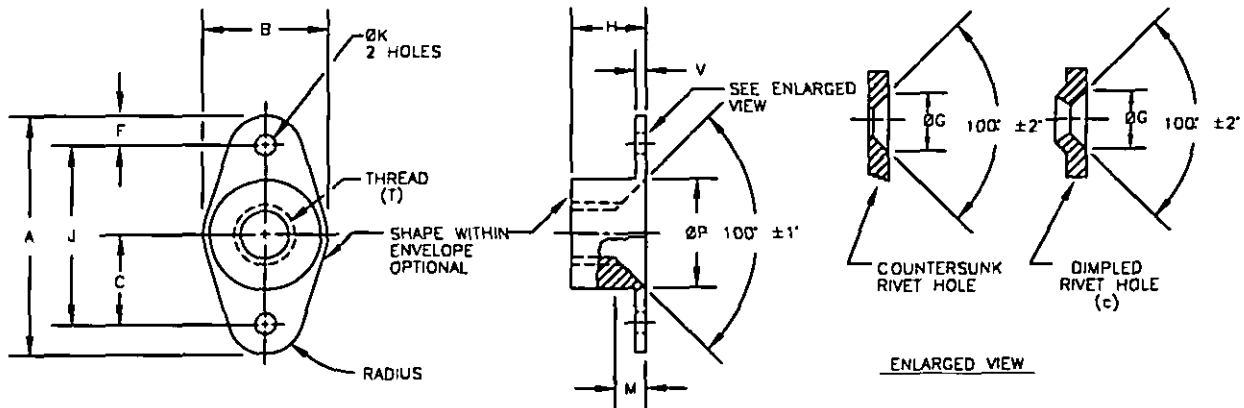


TABLE I.

(T) THREAD SIZE	A	B		C	F	ØG	(a) H	(b) J	ØK	M	ØP	V MAT'L	AXIAL STRENGTH LBS.	WEIGHT LBS/100
	MAX.	MAX.	MIN.	±.005	MIN.	±.010	MAX.	±.002	+.005 -.000	REF	±.005	MAX.	MIN.	MAX.
.1640-32UNJC-3B	.948	.422	.360	.344	.100	.200	.272	.688	.098	.084	.365	.047	1,720	.39
.1900-32UNJF-3B	.948	.453	.406	.344	.100	.200	.281	.688	.098	.093	.411	.047	2,460	.41
.2500-28UNJF-3B	1.260	.619	.535	.500	.100	.200	.340	1.000	.098	.121	.540	.055	4,580	.88
.3125-24UNJF-3B	1.292	.766	.681	.500	.125	.230	.422	1.000	.130	.156	.686	.065	7,390	1.17

- (a) MINIMUM 'H' NOT SPECIFIED, LIMITED ONLY BY STRENGTH REQUIREMENTS.
(b) THE CENTER OF THE TAPPED HOLE SHALL NOT DEVIATE IN ANY DIRECTION FROM THE CENTER OF THE PLATE NUT AS DETERMINED BY THE RIVET HOLES BY MORE THAN .005.
(c) DIMPLED HOLE TOLERANCE FOR "ØK" IS +.015, -.000 AFTER FORMING.

REQUIREMENTS:

1. MATERIAL: CARBON STEEL COMPOSITIONS 1035 (UNS G10350), 1040 (UNS G10400), AND 1050 (UNS G10500) IN ACCORDANCE WITH ASTM A827 OR QQ-S-700; 1042 (UNS G10420), IN ACCORDANCE WITH ASTM A29. ALLOY STEEL, GRADES 4130 (UNS G41300), 4340 (UNS G43400) OR 87400 (UNS G87400), IN ACCORDANCE WITH ASTM A29.
2. FINISH: CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416 TYPE II, CLASS 2, FOR DRY FILM LUBRICATED NUTS, THE TYPE AND CLASS ARE OPTIONAL IF THE NUTS MEET THE SALT SPRAY REQUIREMENTS OF QQ-P-416 TYPE II.
3. DIMENSIONING AND TOLERANCING: DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
4. HARDNESS: 49 HRC, MAX.
5. THREADS: THREADS IN ACCORDANCE WITH MIL-S-8879.
6. SURFACE TEXTURE: SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL NOT EXCEED 125 MICROINCHES, IN ACCORDANCE WITH ANSI/ASME B46.1.
7. LUBRICANT: DRY FILM LUBRICANT APPROVED IN ACCORDANCE MIL-N-25027. NON-DRY FILM LUBRICANTS SHALL BE SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802.
8. EDGES: BREAK ALL SHARP EDGES AND REMOVE ALL BURRS.
9. COUNTERBORE: ON SIZE .164 AND LARGER, THREAD RELIEF SHALL BE .062 MINIMUM.
10. PART NUMBER: THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE II.

EXAMPLE: MS21049L4K

DASH NUMBER

BASIC MS NUMBER

MS21049L4K INDICATES: NUT, SELF-LOCKING, PLATE, SIDE BY SIDE, REDUCED RIVET SPACING, LOW HEIGHT, STEEL; 125 KSI Flu, 450° F; .250-2B UNJF-3B; DRY FILM LUBRICANT; COUNTERSUNK OR DIMPLED HOLES.

(F) DENOTES CHANGE(S)

INCH-POUND

PREPARING ACTIVITY: DLA-IS

CUSTODIANS: ARMY-AV

NAVY-AS

AIR FORCE-11

DLA-

REVIEW: AS, AV, 11, B2

USER: AT, ER, ME, MI

PROJECT NUMBER: 5310-1945

MILITARY SPECIFICATION SHEET

TITLE

NUT, SELF-LOCKING, PLATE, TWO LUG, 100° CSK
LOW HEIGHT, STEEL, 125 KSI Flu, 450° F

SPECIFICATION SHEET NUMBER

MS21049

15 FEB 94
REV F

SUPERSEDING

MS21049 E 24 SEP 86 (SEE NOTE 4.)

AMSC- N/A

FSC 5310

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

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DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

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NOTES:

1. ALL DIMENSIONS ARE 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.
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. DESIGN AND USAGE LIMITATIONS: THESE NUTS ARE DESIGNED TO BE DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE TENSILE STRENGTH OF 125 KSI BASED ON THE CROSS SECTION AREA AT THE BASIC ROOT DIAMETER OF THE THREADS. THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNAL THREADS. THESE NUTS SHALL BE IN ACCORDANCE WITH THE LIMITATIONS OF MS33588. ONLY NUTS FOR WHICH THESE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED.
5. MS21049 SUPERSEDES NAS681, AN361 AND AN373 IN PART.

INTERCHANGEABILITY RELATIONSHIP:

MS21049 NUTS CAN UNIVERSALLY REPLACE NAS681, AN361 AND AN373 NUTS OF LIKE MATERIAL, THREAD SIZE, PLATING, LUBRICANTS (DRY FILM, OR NON DRY FILM), RIVET SPACING, AND FASTENING METHOD (PLAIN RIVET HOLES, DIMPLED, COUNTERSUNK RIVET HOLES OR PROJECTION WELDING). BUT NAS681, AN361, AND AN373 NUTS CANNOT UNIVERSALLY REPLACE MS21049 NUTS.

TABLE II.

THREAD SIZE	DASH NUMBERS			
	450°F, NON DRY FILM LUBRICATED		450°F, DRY FILM LUBRICATED	
	PLAIN HOLES	CTSK OR DIMPLED HOLES	PLAIN HOLES	CTSK OR DIMPLED HOLES
.1640-32 UNJC-3B	-08	-08K	L08	L08K
.1900-32 UNJF-3B	-3	-3K	L3	L3K
.2500-28 UNJF-3B	-4	-4K	L4	L4K
.3125-24 UNJF-3B	-5	-5K	L5	L5K

TABLE III.

INTERCHANGEABILITY TABLE			
INACTIVE FOR DESIGN AND CANCELLED PART NUMBERS			SUBSTITUTIVE PART NUMBERS
AN361	AN373	NAS681	
AN361-832	AN373-F832	NAS681-X08	MS21049-08
---	-F832A	---	NO SUBS. PART
---	---	-X08K	MS21049-08K
-832	-F832	-A08	MS21049-L08
---	-F832B	---	NO SUBS. PART
---	---	-A08K	MS21049-L08K
-1032	-F1032	-X3	MS21049-3
---	-F1032A	---	NO SUBS. PART
-1032	-F1032	-A3	MS21049-L3
---	-F1032B	---	NO SUBS. PART
---	---	-A3K	MS21049-L3K
-428	-F428	-X4	MS21049-4
---	-F428A	---	NO SUBS. PART
---	---	-X4K	MS21049-4K
-428	-F428	-A4	MS21049-L4
---	-F428B	---	NO SUBS. PART
---	---	-A4K	MS21049-L4K
---	---	-X3K	MS21049-3K
-524	-F524	-X5	MS21049-5
---	-F524A	---	NO SUBS. PART
---	---	-X5K	MS21049-5K
-524	-F524	-A5	MS21049-L5
---	-F524B	---	NO SUBS. PART
AN361	AN373	NAS681-A5K	MS21049-L5K

PREPARING ACTIVITY: OLA-IS

CUSTODIANS: ARMY-AV

NAVY-AS

AIR FORCE-11

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