

THE REQUIREMENTS FOR ACCURACY OF THE PRODUCT(S) DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION SHEET AND THE ISSUE OF THE FOLLOWING SPECIFICATION LISTED IN THAT ISSUE OF THE DOCSIS 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
DMS No 0704-0188

CONFIGURATION OF NUT OPTIONAL WITHIN THE LIMITATIONS IMPOSED BY DIMENSIONS AND REQUIREMENTS SPECIFIED HEREIN

TABLE I DASH NUMBERS AND DIMENSIONS.

DASH NO	PLAIN HOLES	CSK OR DIMPLED HOLES	T THREAD SIZE	A MAX	B		C ± .005	F MIN	#C ± .010	H		J ± .010	#K 1/ + .005 - .000	#P	
					MAX	MIN				MAX	MIN			MAX	MIN
-04	-04K		1120-40UNC-3B	.984	.418	.328	.344	.115	.200	.218	.140	.688	.098	.260	.198
-06	-06K		1380-32UNC-3B	.984	.418	.328	.344	.115	.200	.234	.160	.688	.098	.260	.198
-08	-08K		1640-32UNC-3B	.984	.418	.328	.344	.115	.200	.312	.234	.688	.098	.270	.234
-3	-3K		1890-32UNF-3B	.984	.418	.328	.344	.115	.200	.312	.234	.688	.098	.270	.230
-4	-4K		2500-28UNF-3B	1.296	.518	.406	.500	.115	.200	.387	.283	1.000	.098	.330	.310
-5	-5K		3125-24UNF-3B	1.296	.809	.484	.500	.115	.230	.387	.283	1.000	1.30	.363	.373
-6	-6K		3780-24UNF-3B	1.296	.841	.583	.500	.115	.230	.478	.438	1.000	1.30	.455	.435
-7	---		4375-20UNF-3B	1.477	.719	.672	.562	148	2/	.504	.470	1.123	161	.517	.487
-8	---		5000-20UNF-3B	1.802	.899	.786	.625	148	2/	.630	.586	1.250	161	.580	.580

TABLE I. Contd

DASH NO	PLAIN HOLES	CSK OR DIMPLED HOLES	V MAX	#W MIN	AXIAL STRENGTH LB - MIN	WEIGHT LBS/100
-06	-06K		.075	138	1,130	.35
-08	-08K		.075	164	1,720	.80
-3	-3K		.075	180	2,480	.80
-4	-4K		.075	260	4,580	1.20
-5	-5K		.075	.312	7,390	2.20
-6	-6K		.075	.375	11,450	2.80
-7	---		.115	.437	15,450	3.30
-8	---		.115	.500	21,110	4.00

1/ DIMPLED RIVET HOLE TOLERANCE FOR #K IS + .015, - .000
2/ NO COUNTERSUNK OR DIMPLED RIVET TYPE AVAILABLE FOR SIZES .4375 AND .5000.

(H) DENOTES CHANGE(S)

INCH-POUND

PREPARING ACTIVITY: DLA-IS CUSTODIAN: ARMY - AV NAVY - AS AIR FORCE - 99	TITLE: MILITARY SPECIFICATION SHEET NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, NON-METALLIC INSERT, STEEL, 125 KSI FN, 250F	SPECIFICATION SHEET NUMBER: MS21077 1 FEB 84 REV N SUPERSEDING: MS21077 G 16 DEC 81 (SEE NOTE 5.) AMSC - N/A FSC 5310
REVISION: 82 USER: CR, MI PROJECT NUMBER: 5310-1983		
DISTRIBUTION STATEMENT: A. Approved for public release, distribution is unlimited		Page 1 of 1

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REQUIREMENTS.

- (H) 1 **MATERIAL.** NUT- CARBON STEEL GRADE 1008 (UNS G10080) PER AMS 5061, 5062, GRADE 1035 (UNS G10350) PER AMS 5080, GRADE 1040 (UNS G10400) PER ASTM A827, GRADE 1042 (UNS G10420) PER ASTM A29, GRADE 1050 (UNS G10500) PER AMS 5085, GRADE 1137 (UNS G11370) PER AMS 5024, GRADE 11L37 (UNS G11374) PER AMS 5020, GRADE 1141 (UNS G11410) PER ASTM A29, GRADE 12L14 (UNS G12144) PER ASTM A108 ALLOY STEEL GRADE 4130 (UNS G4130) PER AMS 8370, GRADE 8740 (UNS G87400) PER MIL-S-6049
- SHIM - (IF APPLICABLE)
CARBON STEEL GRADE 1008 (UNS G10080) PER AMS 5062, GRADE 1010 (UNS G10100) PER AMS 5040 ALUMINUM ALLOY 1100 ANNEALED (UNS A91100) PER QQ-A-250/1
- RETAINER - (IF APPLICABLE)
CARBON STEEL GRADE 1050 (UNS G10080) PER AMS 5062, GRADE 1008 (UNS G10080) PER AMS 5062, GRADE 1010 (UNS G10100) PER AMS 5040, GRADE 1050 (UNS G10500) PER AMS 5085 ALUMINUM ALLOY 2024, TEMPER T4 (UNS A92024) PER QQ-A-250/4 ALUMINUM ALLOY 7075, TEMPER T8 (UNS A97075) PER QQ-A-250/12 OR QQ-A-250/13
- INSERT - NYLON PER ASTM D 4086, GROUP 1, CLASS 1 OR 2
- 2 **FINISH.** STEEL - CADMIUM PLATE IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2 ALUMINUM - ANODIZE OR CHEMICALLY TREAT IN ACCORDANCE WITH PROCUREMENT SPECIFICATION
- 3 **DIMENSIONING AND TOLERANCING.** IN ACCORDANCE WITH ANSI/ASME Y14.5M
- 4 **VIBRATION LIFE.** MINIMUM VIBRATION LIFE REQUIREMENTS SHALL BE THREE TIMES AVERAGE VIBRATION LIFE IN ACCORDANCE WITH PROCUREMENT SPECIFICATION
- 5 **THREADS.** THREADS BEFORE LUBRICATION IN ACCORDANCE WITH MIL-S-8879
- 6 **SURFACE TEXTURE.** IN ACCORDANCE WITH ANSI/ASME B46.1 THE SURFACE TEXTURE SHALL NOT EXCEED 125 MICRONS.
- 7 **LUBRICANT.** DRY FILM LUBRICANT APPROVED IN ACCORDANCE WITH MIL-N-25027 OTHER LUBRICANTS SOLUBLE IN THE CLEANER SPECIFIED IN MIL-S-8802.
- 8 **EDGES.** BREAK SHARP EDGES AND REMOVE ALL BURRS.
- 9 **FLOAT.** FLOAT OF THE NUT PORTION OF ASSEMBLY SHALL NOT BE LESS THAN 0.30 LITERALLY AND LONGITUDINALLY FROM CENTERED POSITION. NUT BODY SHALL BE CAPABLE OF ENGAGEMENT WITH A BOLT IN MAXIMUM MISALIGNED POSITION. MAXIMUM AXIAL FLOAT .020 INCHES FOR 1900 AND SMALLER, 0.30 FOR 2500 AND LARGER. NUT MISALIGNMENT SHALL NOT EXCEED DIMENSION "B" OF THE NUT AND BASE PORTION OF THE ASSEMBLY SHALL FORM ONE INTEGRAL UNIT AND THE ASSEMBLY SHALL PROVIDE A BEARING SURFACE FOR THE NUT
- 10 EXAMPLE OF PART NUMBER: MS21077-4 = .2500-28 UNLF-38 NUT, SELF-LOCKING PLATE, FLOATING, NON-METALLIC INSERT, STEEL, 125 KSI F_{tu}, 280 DEG, TWO LUG, PLAIN HOLES
- NUT DASH NUMBER
- BASIC MS PART NUMBER

NOTES.

- 1 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 SPECIFICATION AND STANDARDS (DODDSS) 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 DEVELOP THE TENSILE STRENGTH OF BOLTS AND SCREWS WITH AN ULTIMATE TENSILE STRENGTH OF 125 KSI BASED ON THE CROSS SECTIONAL AREA AT THE BASIC DIAMETER OF THE THREAD. THESE NUTS ARE DESIGNED TO BE USED ON 3A EXTERNALS THREADS. THESE NUTS SHALL BE USED IN ACCORDANCE WITH THE LIMITATIONS OF MS33688 ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED IN QPL25027 SHALL BE USED
- 5 MS21077 SUPERSEDES NAS1031

PREPARING ACTMITY DLA-IS CUSTODIANS ARMY- AV NAVY- AS AIR FORCE- 09 REVIEW AIR FORCE-82 USER ARMY-CR, MI PROJECT NUMBER 8310-1983	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING, PLATE, TWO LUG FLOATING, NON-METALLIC INSERT, STEEL, 125 KSI F _{tu} , 280F	SPECIFICATION SHEET NUMBER MS21077 1 FEB 84 REV H SUPERSEDING MS21077 G 18 DEC 91 (SEE NOTE 5.) AMSC- N/A FSC 5310
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DISTRIBUTION STATEMENT

A. Approved for public release, distribution is unlimited.

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INTERCHANGEABILITY RELATIONSHIP

MS21077 NUTS CAN UNIVERSALLY REPLACE NAS1031 NUTS OF LIKE MATERIAL, THREAD SIZE AND FASTENING METHOD (PLAIN RIVET HOLES OR COUNTERSUNK RIVET HOLES) BUT THESE NAS1031 NUTS CANNOT UNIVERSALLY REPLACE MS21077 NUTS.

TABLE II. INTERCHANGEABILITY.

CANCELLED PART NUMBERS	SUBSTITUTIVE PART NUMBERS
NAS1031N04	MS21077-04
NAS1031N04K	MS21077-04K
NAS1031N06	MS21077-06
NAS1031N06K	MS21077-06K
NAS1031N08	MS21077-08
NAS1031N08K	MS21077-08K
NAS1031N3	MS21077-3
NAS1031N3K	MS21077-3K
NAS1031N4	MS21077-04
NAS1031N4K	MS21077-4K
NAS1031N5	MS21077-5
NAS1031N5K	MS21077-5K
NAS1031N6	MS21077-6
NAS1031N7	MS21077-7
NAS1031N8	MS21077-8

PREPARING ACTIVITY DLA-ES CUSTOMERS: ARMY- AV NAVY- AS AIR FORCE- 99 REVIEW: B2 USER: CR, MI PROJECT NUMBER: 5310-1963	MILITARY SPECIFICATION SHEET TITLE NUT, SELF-LOCKING, PLATE, TWO LUG, FLOATING, NON-METALLIC INSERT, STEEL, 125 KSI F _y , 290F	SPECIFICATION SHEET NUMBER MS21077 1 FEB 94 REV H
		SUPERSEDING MS21077 G 16 DEC 81 (SEE NOTE 5) ANSC- N/A FSC 5310
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