

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

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 DOOSIS SPECIFIED IN THE SOLICITATION: MIL-N-25027

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

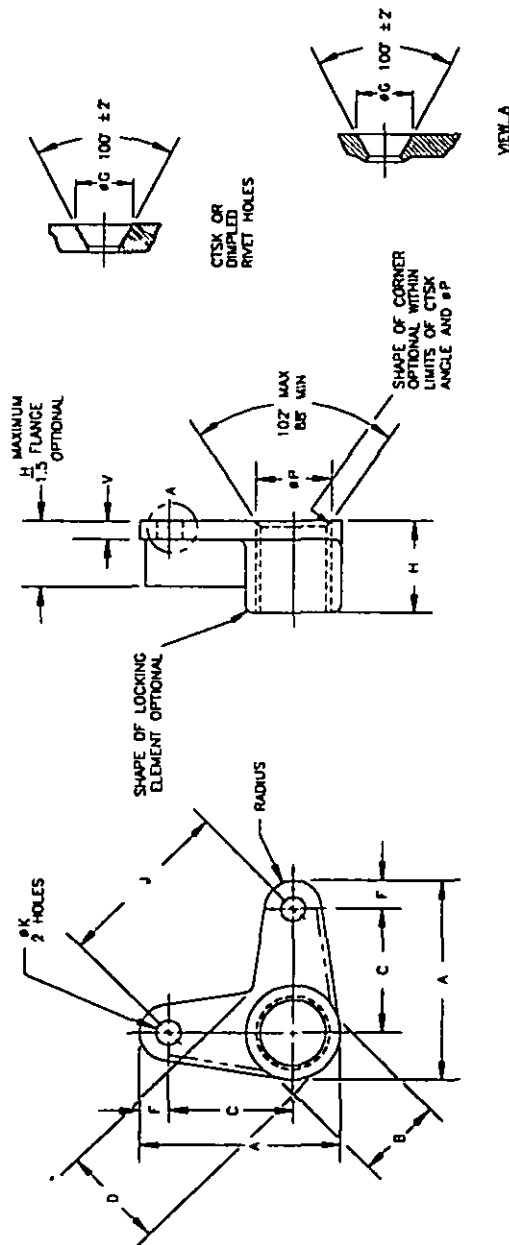


TABLE 1. DASH NUMBERS AND DIMENSIONS

DASH NUMBER	T THREAD SIZES	A		B		C	D	F	G	H		J	2/ J #K	EP		V	AXIAL STRENGTH LBS/MIN	WEIGHT LBS/100
		MAX	MIN	MAX	MIN					MAX	MIN			MAX	MIN			
-04	-04K	.650	.344	.314	.344	.531	.115	.200	.218	.141	.486	.098	.166	.112	.075	.750	.75	
-06	-06K	.703	.408	.373	.344	.531	.115	.200	.234	.160	.486	.098	.177	.138	.075	1.130	.85	
-08	-08K	.703	.408	.373	.344	.531	.115	.200	.297	.219	.486	.098	.230	.164	.075	1.720	1.00	
-1	-1K	.703	.408	.373	.344	.531	.115	.200	.312	.234	.486	.098	.230	.190	.075	2.460	1.00	
-4	-4K	.908	.514	.484	.500	.600	.115	.200	.375	.240	.707	.098	.293	.250	.075	4.580	1.80	
-5	-5K	.937	.582	.500	.500	.625	.115	.230	.375	.240	.707	.130	.354	.312	.075	7.390	1.80	
-6	-6K	1.008	.718	.609	.500	.718	.115	.230	.453	.318	.707	.130	.418	.375	.075	11.450	2.50	
-7	-7K	1.125	.782	.672	.562	.782	.135	.312	.469	.435	.795	.161	.487	.437	.115	15.450	3.00	
-8	-8K	1.234	.874	.766	.625	.874	.135	.312	.609	.575	.884	.161	.550	.500	.115	21.110	4.80	
-10	-10K	1.437	1.010	.964	.750	1.010	.135	.312	.765	.732	1.061	.161	.876	.825	.115	34.130	8.60	

Form Approved  
OMB No. 0704-0188

1/ NO COUNTERSINK OR DIMPLED RIVET TYPE AVAILABLE FOR SIZES .4375 THRU .625.  
 2/ CENTER OF THE TAPPED HOLES SHALL NOT DEVIATE IN ANY DIRECTION FROM THE CENTER OF THE  
 PLATE NUT AS DETERMINED BY THE RIVET HOLES BY MORE THAN .005.  
 3/ DIMPLED RIVET HOLE TOLERANCE FOR "JK" IS +.015-.000.

D DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: DLA-IS  
 CUSTOMERS: ARMY-AV NAVY-AS  
 AIR FORCE-11 DLA-  
 REVIEW: IS, 82  
 USER: CR, MI  
 PROJECT NUMBER: 5310-1857

MILITARY SPECIFICATION SHEET  
 TITLE  
 NUT, SELF-LOCKING, PLATE, CORNER,  
 NON-METALLIC INSERT, STEEL,  
 125KSI Flu, 250°F

SPECIFICATION SHEET NUMBER  
 MS21081D 20 APR 83  
 SUPERSEDING  
 MS21081 30 SEP 87 (SEE NOTE 2.)  
 AMSC- N/A FSC 5310

DISTRIBUTION STATEMENT

A. Approved for public release; distribution is unlimited.

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OMB No. 0704-0188**REQUIREMENT:**

- MATERIAL:** CARBON STEEL, COMPOSITIONS 1035 (UNS G10350), 1040 (UNS G10400), AND 1050 (UNS G10500) IN ACCORDANCE WITH QQ-S-635, 1042 (UNS G10420), AISI 1137 (UNS G11370), AISI 1018 (UNS G10180), AISI 1110 (UNS G11100), IN ACCORDANCE WITH ASTM A29. ALLOY STEEL GRADES 4130 (UNS G41300), 4340 (UNS G43400) AND 8740 (UNS G87400) IN ACCORDANCE WITH ASTM A29. INSERT - NON-METALLIC, NYLON OR EQUIVALENT.
- FINISH:** CADMIUM PLATE IN ACCORDANCE WITH QQ-F-416, TYPE II, CLASS 2.
- DIMENSIONING AND TOLERANCING:** DIMENSIONING AND TOLERANCING SHALL BE IN ACCORDANCE WITH ANSI Y14.5M.
- HARDNESS:** 35HRC, MAX.
- THREADS:** THREADS IN ACCORDANCE WITH MIL-S-8879.
- SURFACE TEXTURE:** SURFACE TEXTURE, UNLESS OTHERWISE SPECIFIED, SHALL NOT EXCEED 125 MICROINCHES, IN ACCORDANCE WITH ANSI/ASME B46.1.
- VIBRATION LIFE:** MINIMUM VIBRATION LIFE REQUIREMENT SHALL BE THREE TIMES AVERAGE VIBRATION LIFE IN ACCORDANCE WITH PROCUREMENT SPECIFICATION.
- EDGES:** BREAK ALL SHARP EDGES AND REMOVE ALL BURRS.
- PART NUMBER:** THE PART NUMBER SHALL CONSIST OF THE BASIC MS NUMBER FOLLOWED BY A DASH NUMBER FROM TABLE I.

EXAMPLE: MS21081-4

└── DASH NUMBER  
└── BASIC MS NUMBER

MS21081-4 INDICATES: NUT, SELF-LOCKING, PLATE, CORNER, NON-METALLIC INSERT, STEEL,  
125 KSI F<sub>u</sub>, 250-28F, .250-28 UNJF-3B; PLAIN HOLES.

**NOTES:**

- ALL DIMENSIONS ARE IN INCHES.
- MS21081 SUPERSEDES NAS 1027 IN PART.
- 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.
- 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.
- 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 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 USED IN ACCORDANCE WITH THE LIMITATIONS OF MS33588. ONLY NUTS FOR WHICH THERE ARE QUALIFIED PRODUCTS LISTED ON QPL 25027 SHALL BE USED.

**INTERCHANGEABILITY RELATIONSHIP**

MS21081 NUTS CAN UNIVERSALLY REPLACE NAS1027 NUTS OF LIKE MATERIAL, THREAD SIZE AND FASTENING METHOD (PLAIN RIVET HOLES, DIMPLED OR COUNTERSUNK RIVET HOLES), BUT THESE NAS1027 NUTS CANNOT UNIVERSALLY REPLACE MS21081 NUTS.

**INTERCHANGEABILITY TABLE**

CANCELLED PART NUMBERS	SUBSTITUTIVE PART NUMBERS
NAS1027N04	MS21081-04
NAS1027N04K	MS21081-04K
NAS1027N06	MS21081-06
NAS1027N06K	MS21081-06K
NAS1027N08	MS21081-08
NAS1027N08K	MS21081-08K
NAS1027N3	MS21081-3
NAS1027N3K	MS21081-3K
NAS1027N4	MS21081-4
NAS1027N4K	MS21081-4K
NAS1027N5	MS21081-5
NAS1027N5K	MS21081-5K
NAS1027N6	MS21081-6
NAS1027N6K	MS21081-6K
NAS1027N7	MS21081-7
NAS1027N7K	MS21081-7K
NAS1027N8	MS21081-8
NAS1027N8K	MS21081-8K
NAS1027N10	MS21081-10
NAS1027N10K	MS21081-10K

PREPARING ACTIVITY: DLA-IS CUSTODIANS: ARMY-AV      NAVY-AS AIR FORCE-11      DLA- REVIEW: IS, B2 USER: CR, MI PROJECT NUMBER: 5310-1857	<b>MILITARY SPECIFICATION SHEET</b> TITLE NUT, SELF-LOCKING, PLATE, CORNER, NON-METALLIC INSERT, STEEL, 125KSI F <sub>u</sub> , 250F	SPECIFICATION SHEET NUMBER <b>MS21081D</b> 20 APR 93 SUPERSEDING MS21081      30 SEP 87      (SEE NOTE 2.) AMSC-      N/A      FSC 5310
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.		Page <u>2</u> of <u>2</u>

DD Form 672, MAY 88

PREVIOUS EDITIONS ARE OBSOLETE

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