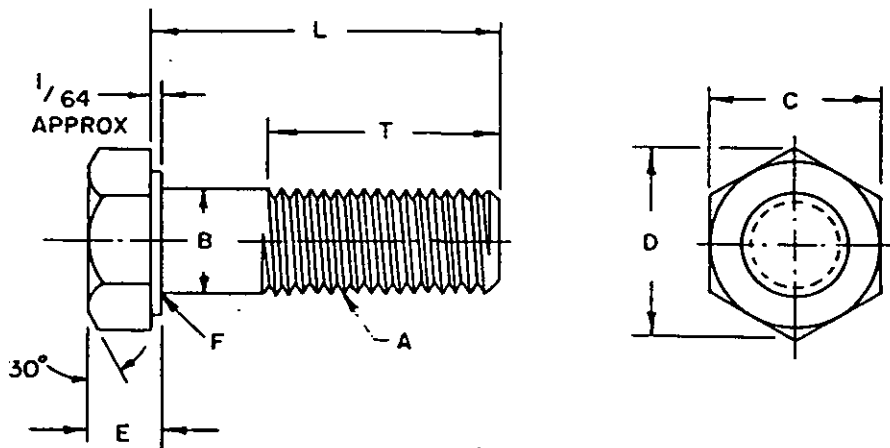


FED. SUP. CLASS  
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(Project 5306-N010Sh) (A) For changes see sheets 1 through 5

APPROVED 8 MAY 1957 REVISED (A) 19 AUGUST 1966

CUSTODIANS <b>Ships</b>	OTHER INT.	<b>MILITARY STANDARD</b>	<b>MS 16205</b> (SHIPS)
	A - N - AF -		
Procurement Specification <b>(A) MIL-B-857</b>		CON BRONZE), UNC-2A, NON-MAGNETIC	SHEET 1 OF 5

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Nominal size A Threads per inch B Body diameter C Width across flats D Width across corners E Head height F Radius	1/4 UNC-2A		5/16 UNC-2A		3/8 UNC-2A		7/16 UNC-2A	
	MS part No.	FIIN	MS part No.	FIIN	MS part No.	FIIN	MS part No.	FIIN
L Length	1/4	Size 1/4 - 3/8	5/16	Size 5/16 - 1-1/4	3/8	Size 3/8 - 1-1/4	7/16	Size 7/16 - 1-1/4
1	1-1/4		1		1		1	
2	1-1/2		2		2		2	
3	1-3/4		3		3		3	
4	2-1/4		4		4		4	
5	2-1/2		5		5		5	
6	2-3/4		6		6		6	
7	3-1/4		7		7		7	
8	3-1/2		8		8		8	
9	3-3/4		9		9		9	
10	4		10		10		10	
11	4-1/4		11		11		11	
12	4-1/2		12		12		12	
13	4-3/4		13		13		13	
14	5		14		14		14	
15	5-1/2		15		15		15	
16	6-1/2		16		16		16	
17	7-1/2		17		17		17	
18	8		18		18		18	
19			19		19		19	
20			20		20		20	

CUSTODIANS Ships	OTHER INT. A N A F	<b>MILITARY STANDARD</b>		<b>MS16205</b>
		BOLTS, MACHINE, REGULAR SEMI-FINISHED HEXAGON HEAD, COPPER-SILICON ALLOY (SILICON BRONZE), UNC-2A, NON-MAGNETIC		
PROCUREMENT SPECIFICATION MIL-B-857			SUPERSEDES:	SHEET 2 OF 5

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APPROVED 8 MAY 1957 REVISED A For changes see sheets 1 through 5

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L Length	Size 1/4 - 3/8	Tolerance Size 7/16 - 1/2	Size 5/8 - 1-1/4	1/2		5/8		3/4		7/8	
				MS part No.	FINI	MS part No.	FINI	MS part No.	FINI	MS part No.	FINI
1/4				13-UNC2A 0-500	1-UNC2A 0-825	10-UNC2A 0-750	9-UNC2A 0-875				
3/8				450	569	687	803				
1/2				725	908	1088	1268				
5/8				928	1093	1240	1447				
3/4				323	403	483	583				
1-1/4				302	379	455	531				
1-1/2				331	402	482	562				
1-3/4				309	381	461	541				
2-1/4				88	109	130	151				
2-1/2				97	120	142	164				
2-3/4				98	122	144	166				
3				99	123	145	167				
3-1/4				100	124	146	168				
3-1/2				101	125	147	169				
3-3/4				102	126	148	170				
4				103	127	149	171				
4-1/4				104	128	150	172				
4-1/2				105	129	151	173				
4-3/4				106	130	152	174				
5				107	131	153	175				
5-1/4				108	132	154	176				
5-1/2				109	133	155	177				
5-3/4				110	134	156	178				
6				111	135	157	179				
6-1/4				112	136	158	180				
6-1/2				113	137	159	181				
6-3/4				114	138	160	182				
7				115	139	161	183				
7-1/4				116	140	162	184				
7-1/2				117	141	163	185				
7-3/4				118	142	164	186				
8				119	143	165	187				
8-1/4				120	144	166	188				
8-1/2				121	145	167	189				
8-3/4				122	146	168	190				
9				123	147	169	191				
9-1/4				124	148	170	192				
9-1/2				125	149	171	193				
9-3/4				126	150	172	194				
10				127	151	173	195				
10-1/4				128	152	174	196				
10-1/2				129	153	175	197				
10-3/4				130	154	176	198				
11				131	155	177	199				
11-1/4				132	156	178	200				
11-1/2				133	157	179	201				
11-3/4				134	158	180	202				
12				135	159	181	203				
12-1/4				136	160	182	204				
12-1/2				137	161	183	205				
12-3/4				138	162	184	206				
13				139	163	185	207				
13-1/4				140	164	186	208				
13-1/2				141	165	187	209				
13-3/4				142	166	188	210				
14				143	167	189	211				
14-1/4				144	168	190	212				
14-1/2				145	169	191	213				
14-3/4				146	170	192	214				
15				147	171	193	215				
15-1/4				148	172	194	216				
15-1/2				149	173	195	217				
15-3/4				150	174	196	218				
16				151	175	197	219				
16-1/4				152	176	198	220				
16-1/2				153	177	199	221				
16-3/4				154	178	200	222				
17				155	179	201	223				
17-1/4				156	180	202	224				
17-1/2				157	181	203	225				
17-3/4				158	182	204	226				
18				159	183	205	227				
18-1/4				160	184	206	228				
18-1/2				161	185	207	229				
18-3/4				162	186	208	230				
19				163	187	209	231				

CUSTODIANS Shps	OTHER INT. AF	<b>MILITARY STANDARD</b>		<b>MS16205</b> (SHPS)
		BOLTS, MACHINE, REGULAR SEMI-FINISHED HEXAGON HEAD.		
PROCUREMENT SPECIFICATION MIL-B-857		COPPER-SILICON ALLOY (SILICON BRONZE), UNC-2A, NON-MAGNETIC		SHEET 3 OF 5
SUPERSEDES:				

NO FORM 672-1  
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APPROVED 8 MAY 1957 REVISED A For changes see sheets 1 through 5

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Nominal size	1-1/4		1-3/8		1-1/2		1-3/4		2		2-1/2		3		3-1/2		4		4-1/2		5		5-1/2		6		6-1/2		7		7-1/2		8		9		10		11		12		13		14		15		16		18		20					
	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.	UNC2A	Part No.										
A Threads per inch	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150	11.5	1150						
B Body diameter	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375	1.375	1375						
C Width across flats	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875	1.875	1875						
D Width across corners	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062	2.062	2062						
E Head height	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875	0.875	875				
F Radius	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62	0.062	62

CUSTODIANS Ships	OTHER INT. A B C D E F G H I J K L M N O P Q R S T U V W X Y Z	<b>MILITARY STANDARD</b>		<b>MS16205</b> (SHIPS)
		BOLTS, MACHINE, REGULAR SEMI-FINISHED HEXAGON HEAD, COPPER-SILICON ALLOY (SILICON BRONZE), UNC-2A, NON-MAGNETIC		
PROVIDENT SPECIFICATION MIL-B-857	SUPERSEDES:			SHEET 4 OF 5

NO FORM 672-1  
1 OCT 52

APPROVED 8 MAY 1957 REVISED (A) For changes see sheets 1 through 5

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(A) Material: Copper silicon alloy (silicon bronze) shall be in accordance with copper alloy 651 of QQ-C-591.  
 Protective coating: None.  
 Threads: UNC-2A shall be in accordance with Handbook H-28.  
 Thread length: Minimum thread length shall be twice the nominal size (diameter) plus 1/4 inch for bolt lengths 6 inches and less, and twice the nominal size plus 1/2 inch for bolt lengths over 6 inches. Bolts too short for minimum thread length shall be threaded as close to the head as practicable.  
 Minimum breaking strength: The minimum breaking strength, in tension, of the bolts shall be as follows:

- Sizes to 1/2 inclusive - 80,000 p. s. i.
- Sizes 5/8 to 7/8 inclusive - 70,000 p. s. i.
- Sizes 1 to 1-1/2 inclusive - 50,000 p. s. i.

(A) Minimum elongation - 10 percent in 2 inches.

Dimensions: All dimensions are in inches, unless otherwise specified.

- Notes:
1. In case of conflict with any document referenced herein, this standard shall govern.
  2. Referenced documents shall be the issue in effect on date of invitation for bids.

APPROVED 8 MAY 1957 REVISED (A) For changes see sheets 1 through 5

CUSTODIANS <b>Ships</b>	OTHER INT.	<b>MILITARY STANDARD</b>	<b>MS 16205</b> (SHIPS)
	A - N - AF -		
Procurement Specification (A) MIL-B-857		CON BRONZE), UNC-2A, NON-MAGNETIC	SHEET 5 OF 5