

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 BOOKS SPECIFIED IN THE SOLICITATION: FF-R-556

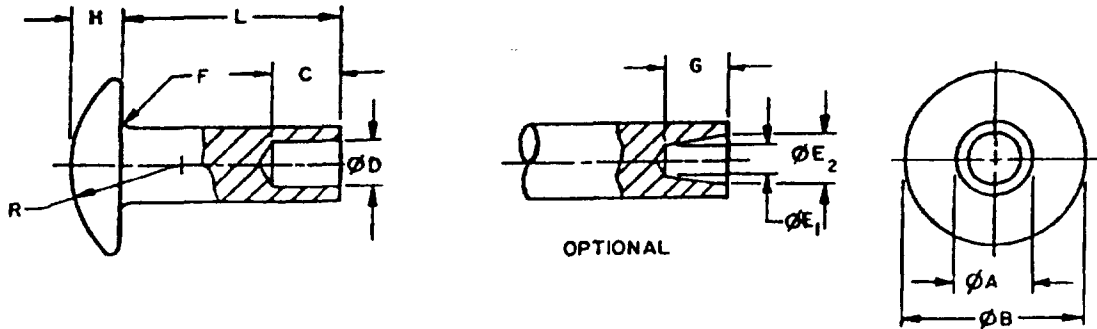


TABLE I

NOMINAL SIZE		.061		.089		.123		.146		.188	
		MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
BODY DIAMETER	ØA	.058	.061	.085	.089	.118	.123	.141	.146	.182	.188
HEAD DIAMETER	ØB	.104	.114	.142	.152	.213	.223	.229	.239	.306	.318
HEAD THICKNESS	H	.015	.019	.020	.026	.030	.038	.035	.045	.055	.065
STRAIGHT HOLE	D	.039	.044	.062	.068	.084	.090	.100	.107	.134	.141
TAPER AT BOTTOM OF HOLE	ØE <sub>1</sub>	.032		.050		.079		.085		.110	
TAPER AT END OF RIVET	ØE <sub>2</sub>	.042	.046	.064	.068	.091	.095	.106	.112	.139	.145
FILLET	F		.008		.012		.016		.020		.025
HOLE DEPTH (TAPER)	C	.042		.057		.082		.104		.135	
HOLE DEPTH (STRAIGHT)	NOM C		.046		.064		.094		.126		.155
APPROX RADIUS	R		.160		.220		.310		.270		.250
CLINCH ALLOWANCE 1/			.037		.064		.074		.089		.120

1/ FOR REFERENCE ONLY. OPTIMUM VALUES VARY WITH CHARACTERISTICS OF MATERIALS TO BE RIVETED, AND SHOULD BE DETERMINED BY ACTUAL TEST IF POSSIBLE.

REQUIREMENTS:

- MATERIAL:** STEEL, CARBON, COMPOSITION 1005 THRU 1022 (UNS G10050 THRU UNS G10200), IN ACCORDANCE WITH ASTM A29/A29M. BRASS 1/8 TO 1/4 HARD, COMPOSITION 260 OR 270, (UNS C26000 OR UNS C27000), IN ACCORDANCE WITH QQ-W-321. ALUMINUM ALLOY, COMPOSITION 2117-T4 OR 5056-H32, (UNS A92117 OR UNS A95056), IN ACCORDANCE WITH QQ-A-430. NICKEL-COPPER ALLOY (MONEL), CLASS A, NO. 0 TEMPER, (UNS N04400), IN ACCORDANCE WITH QQ-N-281. COPPER, TYPE S, (UNS C10200), IN ACCORDANCE WITH QQ-W-343. CORROSION RESISTANT STEEL, CLASS 302, 304, OR 305 (UNS S30200, UNS S30400, OR UNS S30500) IN ACCORDANCE WITH QQ-S-763.
- PROTECTIVE COATING:** STEEL, CARBON, CADMIUM PLATED, TYPE II, CLASS 2, IN ACCORDANCE WITH QQ-P-416. BRASS, BLACK (OXIDE) FINISH, IN ACCORDANCE WITH MIL-F-495, OR NICKEL PLATING, CLASS 1, FULLY BRIGHT, 0.0002 THICK, IN ACCORDANCE WITH QQ-N-290. ALUMINUM ALLOY, COMPOSITIONS 2117-T4 AND 5056-H32 ANODIZED IN ACCORDANCE WITH MIL-A-8625 OR GIVEN A CHEMICAL FILM AS SPECIFIED IN MIL-C-5541. CORROSION RESISTANT STEEL, PASSIVATED IN ACCORDANCE WITH QQ-P-35.
- DOUBLE SHEAR STRENGTH:**

CARBON STEEL RIVETS	32,000 PSI MIN
BRASS RIVETS	35,000 PSI MIN
ALUMINUM RIVETS (2117)	26,000 PSI MIN
ALUMINUM RIVETS (5056)	24,000 PSI MIN
NICKEL ALLOY (MONEL) RIVETS	49,000 PSI MIN
COPPER RIVETS	24,000 PSI MIN
CORROSION RESISTANT STEEL RIVETS	65,000 PSI MIN
- TOLERANCES:** TOLERANCES ARE ±.005 FOR DECIMAL DIMENSIONS, UNLESS OTHERWISE SPECIFIED. LENGTH TOLERANCES SHALL BE IN ACCORDANCE WITH ANSI B18.7.

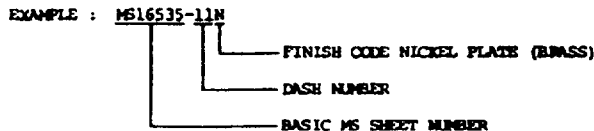
Ⓝ DENOTES CHANGE

INCH-POUND

PREPARING ACTIVITY: ARMY-AR CUSTODIANS: ARMY-AR NAVY-OS AIR FORCE-99 DLA- REVIEW: ARMY-EA, GL MI AIR FORCE-82 DLA-S NSA-NS USER: ARMY-ER, ME NAVY-MC PROJECT NUMBER: 5320-0778	MILITARY SPECIFICATION SHEET TITLE RIVET - TUBULAR, OVAL HEAD	SPECIFICATION SHEET NUMBER MS16535J 26 MAY 92 SUPERSEDING MS16535H 21 NOV 89 ANSC- N/A FSC- 5320
DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.		Page 1 of 3

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

5. **PART NUMBER.** THE PART NUMBER SHALL CONSIST OF THE BASIC MS SHEET NUMBER, FOLLOWED BY A DASH NUMBER TAKEN FROM TABLE II. ADD "N" AS A SUFFIX TO DASH NUMBER FOR NICKEL PLATING TO BRASS MATERIAL. ADD "A" IN LIEU OF DASH FOR ALUMINUM ALLOY, COMPOSITION 5056-H32, (UNS A95056).



- EXAMPLE:
- MS16535-1 RIVET, CARBON STEEL, CADMIUM PLATED.
  - MS16535-11 RIVET, BRASS, BLACK (OXIDE) FINISH.
  - MS16535-11N RIVET, BRASS, NICKEL PLATE FINISH.
  - MS16535-21 RIVET, ALUMINUM ALLOY, COMPOSITION NO. 2117-T4, (UNS A92117).
  - MS16535A21 RIVET, ALUMINUM ALLOY, COMPOSITION NO. 5056-H32, (UNS A95056).
  - MS16535-424 RIVET, CORROSION RESISTANT STEEL PASSIVATED

NOTES:

1. DIMENSIONS. 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. ADDITIONAL SUPERSESSION DATA - SUPERSEDES: MS20450 IN PART.

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PREPARING ACTMITY: ARMY-AR CUSTODIANS: ARMY-AR NAVY-OS AIR FORCE-99 DLA- REVIEW: ARMY-EA, GL, MI, AIR FORCE-82 DLA-IS NSA-NS USER: ARMY-ER, ME, NAVY-MC PROJECT NUMBER: 5320-0779	MILITARY SPECIFICATION SHEET  TITLE  RIVET-TUBULAR, OVAL HEAD	SPECIFICATION SHEET NUMBER MS16535J 26 MAY 92
		SUPERSADING MS16535H 21 NOV 89
		AMSC- N/A FSC- 5320
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TABLE 1. PSI RIVETS AND DIMENSIONS.

LENGTH	CARBON STEEL		SUS304		SUS316		SUS304L		SUS316L		NICKEL COPPER		ALUMINUM ALLOY		INCONEL		OTHER (J)			
	.061	.089	.121	.146	.188	.081	.089	.121	.146	.188	.061	.089	.121	.146	.188	.061	.089	.121	.146	
.078	51	111	402	63	111	402	63	111	402	63	111	402	63	111	402	63	111	402	63	111
.094	52	112	403	64	112	403	64	112	403	64	112	403	64	112	403	64	112	403	64	112
.109	53	113	404	65	113	404	65	113	404	65	113	404	65	113	404	65	113	404	65	113
.125	54	114	405	66	114	405	66	114	405	66	114	405	66	114	405	66	114	405	66	114
.141	55	115	406	67	115	406	67	115	406	67	115	406	67	115	406	67	115	406	67	115
.156	56	116	407	68	116	407	68	116	407	68	116	407	68	116	407	68	116	407	68	116
.172	57	117	408	69	117	408	69	117	408	69	117	408	69	117	408	69	117	408	69	117
.188	58	118	409	70	118	409	70	118	409	70	118	409	70	118	409	70	118	409	70	118
.203	59	119	410	71	119	410	71	119	410	71	119	410	71	119	410	71	119	410	71	119
.219	60	120	411	72	120	411	72	120	411	72	120	411	72	120	411	72	120	411	72	120
.234	61	121	412	73	121	412	73	121	412	73	121	412	73	121	412	73	121	412	73	121
.250	62	122	413	74	122	413	74	122	413	74	122	413	74	122	413	74	122	413	74	122
.266	63	123	414	75	123	414	75	123	414	75	123	414	75	123	414	75	123	414	75	123
.281	64	124	415	76	124	415	76	124	415	76	124	415	76	124	415	76	124	415	76	124
.297	65	125	416	77	125	416	77	125	416	77	125	416	77	125	416	77	125	416	77	125
.312	66	126	417	78	126	417	78	126	417	78	126	417	78	126	417	78	126	417	78	126
.328	67	127	418	79	127	418	79	127	418	79	127	418	79	127	418	79	127	418	79	127
.344	68	128	419	80	128	419	80	128	419	80	128	419	80	128	419	80	128	419	80	128
.359	69	129	420	81	129	420	81	129	420	81	129	420	81	129	420	81	129	420	81	129
.375	70	130	421	82	130	421	82	130	421	82	130	421	82	130	421	82	130	421	82	130
.391	71	131	422	83	131	422	83	131	422	83	131	422	83	131	422	83	131	422	83	131
.406	72	132	423	84	132	423	84	132	423	84	132	423	84	132	423	84	132	423	84	132
.422	73	133	424	85	133	424	85	133	424	85	133	424	85	133	424	85	133	424	85	133
.438	74	134	425	86	134	425	86	134	425	86	134	425	86	134	425	86	134	425	86	134
.453	75	135	426	87	135	426	87	135	426	87	135	426	87	135	426	87	135	426	87	135
.469	76	136	427	88	136	427	88	136	427	88	136	427	88	136	427	88	136	427	88	136
.484	77	137	428	89	137	428	89	137	428	89	137	428	89	137	428	89	137	428	89	137
.500	78	138	429	90	138	429	90	138	429	90	138	429	90	138	429	90	138	429	90	138
.515	79	139	430	91	139	430	91	139	430	91	139	430	91	139	430	91	139	430	91	139
.531	80	140	431	92	140	431	92	140	431	92	140	431	92	140	431	92	140	431	92	140
.547	81	141	432	93	141	432	93	141	432	93	141	432	93	141	432	93	141	432	93	141
.562	82	142	433	94	142	433	94	142	433	94	142	433	94	142	433	94	142	433	94	142
.578	83	143	434	95	143	434	95	143	434	95	143	434	95	143	434	95	143	434	95	143
.593	84	144	435	96	144	435	96	144	435	96	144	435	96	144	435	96	144	435	96	144
.609	85	145	436	97	145	436	97	145	436	97	145	436	97	145	436	97	145	436	97	145
.624	86	146	437	98	146	437	98	146	437	98	146	437	98	146	437	98	146	437	98	146
.640	87	147	438	99	147	438	99	147	438	99	147	438	99	147	438	99	147	438	99	147
.655	88	148	439	100	148	439	100	148	439	100	148	439	100	148	439	100	148	439	100	148

PREPARING ACTIVITY: ARMY-AR CUSTODIANS: ARMY-AR    NAVY-OS REVIEW: AIR FORCE-99    DLA- ARMY-EA, GL, MI AIR FORCE-82 DLA-IS    NSA-NS USER: ARMY-ER, ME NAVY-MC PROJECT NUMBER: 5320-0779	MILITARY SPECIFICATION SHEET TITLE <b>RIVET-TUBULAR, OVAL HEAD</b>		SPECIFICATION SHEET NUMBER <b>MS16535J    26 MAY 92</b>	
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