

INCH-POUND

A-A-59425  
20 APRIL 1999

## COMMERCIAL ITEM DESCRIPTION

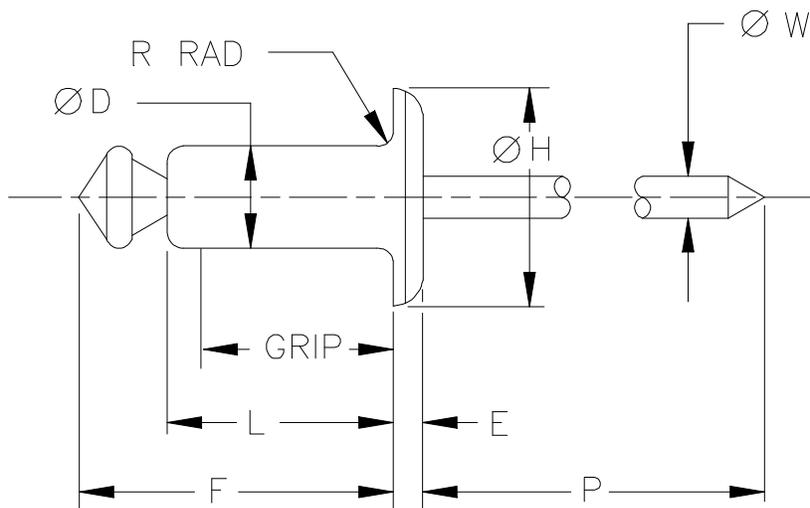
RIVETS, BLIND, NONSTRUCTURAL, RETAINED MANDREL,  
OPEN END, DOMED HEAD, ALUMINUM ALLOY,  
CARBON STEEL, CORROSION RESISTANT STEEL

This General Services Administration has authorized the use of this Commercial Item Description for all Federal agencies.

1. SCOPE: This Commercial Item Description (CID) covers the requirements for pull-stem expandable blind rivets. These rivets are intended for rapid and permanent non-structural fastening applications in which access is available to one side only.

2. SALIENT CHARACTERISTICS:

2.1 Blind rivets furnished under this CID shall conform to the materials, strengths, and dimensions as specified in Table I, II, and III and as shown in Figure 1 below.

FIGURE 1. RIVETS

BENEFICIAL COMMENTS, RECOMMENDATIONS, ADDITIONS, DELETIONS, CLARIFICATIONS, ETC., AND DATA WHICH MAY IMPROVE THIS DOCUMENT SHOULD BE SENT TO: DEFENSE INDUSTRIAL SUPPLY CENTER, ATTN: DISC-AEEB, 700 ROBBINS AVENUE, PHILADELPHIA, PA 19111-5096.

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TABLE I. MATERIAL COMBINATION SYMBOLS AND STRENGTHS

SYMBOL	MATERIAL COMBINATION	RIVET DIA	MINIMUM SHEAR LOAD LBS	MINIMUM TENSION LOAD LBS
A	Body: 5056 Al Alloy (UNS A95056) Mandrel: 1006-1038 Steel (UNS G10060-G10380)	.094	90	120
		.125	170	220
		.156	260	350
		.188	380	500
		.250	700	920
B	Body: 5052 Al Alloy (UNS A95052) Mandrel: 2024 Al Alloy (UNS A92024)	.094	70	80
		.125	120	150
		.156	190	230
		.188	260	320
		.250	460	560
D	Body: 1006-1010 Steel (UNS G10060-G10100) Mandrel: 1030-1060 Steel (UNS G10300-G10600)	.094	130	170
		.125	260	310
		.156	370	470
		.188	540	680
		.250	1000	1240
F	Body: 302 CRES (UNS S30200) 302-HQ-CRES (UNS S30430) 304 CRES (UNS S30400) 305 CRES (UNS S30500) Mandrel: 304 CRES (UNS S30400) 305-431 CRES (UNS S30500-S43100)	.094	230	280
		.125	420	530
		.156	650	820
		.188	950	1200
		.250	1700	2100
G	Body: 302 CRES (UNS S30200) 302-HQ-CRES (UNS S30430) 304 CRES (UNS S30400) 305 CRES (UNS S30500) Mandrel: 1030-1060 Steel (UNS G10300-G10600)	.094	230	280
		.125	420	530
		.156	650	820
		.188	950	1200
		.250	1700	2100

TABLE II. BASIC DIMENSIONS

NOM DIA. SIZE CODE	NOM DIA	BASIC DIMENSIONS							RECOMMENDED HOLE SIZE
		ØD	ØH	E	R MAX	ØW NOM	F MAX	P MIN	
3	.094	.096 .090	.198 .178	.032 .022	.015	.057	L MAX + .100	1.00	.097-.100
4	.125	.128 .122	.262 .238	.040 .030	.020	.076	L MAX + .120	1.00	.129-.133
5	.156	.159 .153	.328 .296	.050 .037	.020	.095	L MAX + .140	1.00	.160-.164
6	.188	.191 .183	.394 .356	.060 .045	.025 <u>1/</u>	.114	L MAX + .160	1.00	.192-.196
8	.250	.255 .246	.525 .475	.080 .065	.030 <u>2/</u>	.151	L MAX + .180	1.00	.257-.261

1/ For material combinations F and G, R Max shall be 0.035.

2/ For material combinations F and G, R Max shall be 0.060.

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TABLE III. DASH NUMBERS AND DIMENSIONS

DASH NUMBERS					L MAX	RECOMMENDED GRIP RANGE
A	B	D	F	G		
A302	B302	D302	F302	G302	.250	.032-.125
A304	B304	D304	F304	G304	.375	.126-.250
	B306				.500	.251-.375
A401	B401	D401			.212	.032-.062
A402	B402	D402	F402	G402	.275	.063-.125
A403	B403	D403	F403	G403	.337	.126-.187
A404	B404	D404	F404	G404	.400	.188-.250
A405	B405	D405			.462	.251-.312
A406	B406	D406	F406	G406	.535	.313-.375
A408	B408	D408	F408	G408	.670	.376-.500
A502	B502	D502	F502	G502	.300	.063-.125
A503	B503	D503	F503	G503	.362	.126-.187
A504	B504	D504	F504	G504	.425	.188-.250
A506	B506	D506	F506	G506	.550	.251-.375
A508	B508	D508	F508	G508	.695	.376-.500
A602	B602	D602	F602	G602	.325	.063-.125
A604	B604	D604	F604	G604	.450	.188-.250
A606	B606	D606	F606	G606	.575	.251-.375
A608	B608	D608	F608	G608	.700	.376-.500
A610	B610	D610	F610	G610	.850	.501-.625
A612	B612	D612	F612	G612	.980	.626-.750
A616	B616				1.240	.876-1.000
A804	B804	D804	F804	G804	.500	.126-.250
A806	B806	D806	F806	G806	.625	.251-.375
A808	B808	D808	F808	G808	.750	.376-.500
A810	B810		F810	G810	.900	.501-.625
A812	B812	D812	F812	G812	1.03	.626-.750
		D816			1.290	.751-1.000

2.2 Materials shall be of the type and grade specified in Table I.

### 2.3 Surface Finish

2.3.1 Aluminum alloy rivets shall be furnished either chemically treated in accordance with MIL-C-5541, or anodically treated in accordance with MIL-A-8625 at the supplier's option

2.3.2 Carbon steel bodies shall be zinc plated in accordance with ASTM B633, Type II, FE/ZN5 or phosphate coated in accordance with Type Z, Class 2 or 4B of DOD-P-16232. Carbon steel mandrels shall be zinc plated or phosphate coated.

2.3.3 Corrosion resistant steel bodies shall be passivated in accordance with ASTM A967. Corrosion resistant mandrels shall be passivated.

2.4 Workmanship. Rivets shall be of uniform quality and free from injurious seams and other injurious defects.

2.5 Single shear load. The shear test shall be performed in accordance with Test Method 20 of NASM1312, or equivalent and shall conform to the data specified in Table I.

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2.6 Tension load. The tension test shall be performed in accordance with Test Method 8 of NASM1312, or equivalent and shall conform to the data specified in Table I.

2.7 Packaging requirements The requirements for packaging shall be in accordance with ASTM D3951.

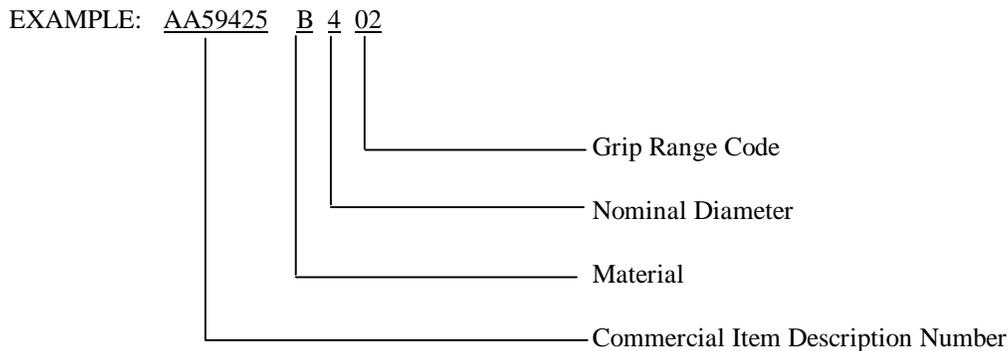
### 3. QUALITY ASSURANCE PROVISIONS.

3.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and the quality assurance practices, and be the same product offered for sale in the commercial market. The government reserves the right to require proof of such conformance.

### 4. NOTES

4.1 All dimensions are in inches.

4.2 The part number shall consist of the basic Commercial Item Description Number followed by a dash number from Table III. The dash number consists of a material combination symbol from Table I, a nominal body diameter size code in thirty-seconds of an inch from Table II, and a maximum grip code in sixteenths of an inch taken from Table III.



AA59425B402 Indicates -

Rivet, blind, nonstructural, retained mandrel, open-end, domed head, 5052 (UNS A95052) aluminum body, 2024 (UNS A92024) aluminum mandrel; nominal body diameter size, .125; grip range, .063-.125.

Military Interests:

Custodians:

Army - AR  
Navy - AS  
Air Force - 99

Preparing Activity:  
DLA-IS

Review Activities:

Army - AV, MI  
Air Force - 11, 82  
National Security Agency-NS

(Project No. 5320-0954)

# STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

## INSTRUCTIONS

1. The preparing activity must complete blocks 1, 2, 3 and 8. In block 1, both the document number and revision letter should be given.
  2. The submitter of this form must complete blocks 4, 5, 6 and 7.
  3. The preparing activity must provide a reply within 30 days from receipt of the form.
- NOTE: This form may not be used to request copies of documents, or to request waivers, or clarification of requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual.

**I RECOMMEND A CHANGE:**
**1. DOCUMENT NUMBER**  
**A-A-59425**
**2. DOCUMENT DATE (YYMMDD)**  
**990420**
**3. DOCUMENT TITLE:**
**RIVETS, BLIND, NONSTRUCTURAL, RETAINED MANDREL, OPEN END, DOMED HEAD, ALUMINUM ALLOY, CARBON STEEL, CORROSION RESISTANT STEEL**
**4. NATURE OF CHANGE**
**5. REASON FOR RECOMMENDATION**
**6. SUBMITTER**
**a. NAME (Last, First, Middle Initial)**
**b. ORGANIZATION**
**c. ADDRESS (Include Zip Code)**
**d. TELEPHONE (Include Area Code)**  
**(1) Commercial**  
**(2) AUTOVON (If applicable)**
**7. DATE SUBMITTED (YYMMDD)**
**8. PREPARING ACTIVITY** DLA-IS

**a. NAME**

Emelia Altomari

**b. TELEPHONE (Include Area Code)**
**(1) Commercial (215) 697-6827**  
**(2) (DSN) 442-6827**
**c. ADDRESS (Include Zip Code)**

 Defense Industrial Supply Center  
 700 Robbins Avenue  
 Bldg. 3 (Code DISC-AESD)  
 Philadelphia, PA 19111-5096

**IF YOU DO NOT RECEIVE A REPLY WITHIN 45 DAYS, CONTACT:**

 Defense Quality and Standardization Office  
 5203 Leesburg Pike, Suite 1403  
 Falls Church, VA 22041  
 TELEPHONE (703) 756-2340 AUTOVON 289-2340