

INCH-POUND

A-A-59429  
20 APRIL 1999

## COMMERCIAL ITEM DESCRIPTION

RIVETS, BLIND, NONSTRUCTURAL, RETAINED MANDREL,  
OPEN END, 120° COUNTERSUNK HEAD, ALUMINUM ALLOY, CARBON STEEL, NICKEL-COPPER  
ALLOY

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.

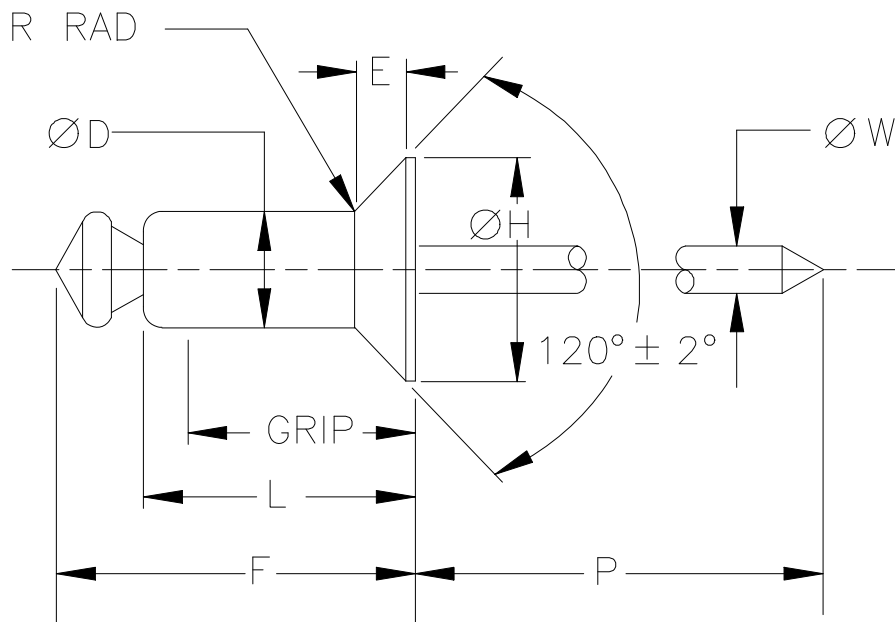


FIGURE 1. RIVETS

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	.125	170	220
	(UNS A95056)	.156	260	350
	Mandrel: 1006-1038 Steel (UNS G10060-G10380)	.188	380	500
B	Body: 5052 Al Alloy	.125	120	150
	(UNS A95052) Mandrel: 2024 Al Alloy (UNS A92024)			
D	Body: 1006-1010 Steel	.125	260	310
	(UNS G10060-G10100) Mandrel: 1030-1060 Steel (UNS G10300-G10600)			
E	Body: Nickel Copper Alloy	.125	350	450
	(UNS N04400)	.156	550	700
	Mandrel: 1030-1060 Steel (UNS G10300-G10600)	.188	800	1000

TABLE II. BASIC DIMENSIONS

NOM DIA	BASIC DIMENSIONS							RECOMMENDED HOLE SIZE
	ØD	ØH	E REF	R MAX	ØW NOM	F MAX	P MIN	
.094	.096	.187	.027	.020	.057	L+.100	1.00	.097-.100
	.090	.161						
.125	.128	.233	.031	.025	.076	L+.120	1.00	.129-.133
	.122	.207						
.156	.159	.294	.040	.030	.095	L+.140	1.06	.160-.164
	.153	.268						
.188	.191	.361	.050	.035	.114	L+.160	1.06	.192-.196
	.183	.335						

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TABLE III. DASH NUMBERS AND DIMENSIONS

DASH NUMBER				L MAX	RECOMMENDED GRIP RANGE
A	B	D	E		
A302 A304	B304	D302 D304		.250 .375	.079-.125 .126-.250
A401 A402 A403 A404 A405 A406	B401 B402 B403 B404 B405 B406	D402 D403 D404 D405 D406	E401 E402 E403 E404 E405	.203 .275 .337 .400 .462 .525	.040-.062 .063-.125 .126-.187 .188-.250 .251-.312 .313-.375
A502 A503 A504 A506 A508	B502 B503 B504 B506 B508	D502 D503 D504 D506 D508	E502 E503 E504 E506	.290 .362 .425 .550 .675	.063-.125 .120-.187 .188-.250 .251-.375 .376-.500
A602 A604 A606 A608 A610 A612	B602 B604 B606 B608 B610	D602 D604 D606 D608 D610	E602 E604 E606 E608 E610	.315 .450 .575 .700 .825 .950	.063-.125 .126-.250 .251-.375 .376-.500 .501-.625 .626-.750

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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. Nickel-Copper Alloy bodies shall be zinc plated in accordance with ASTM B633, Type II, FE/ZN5.

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.

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.

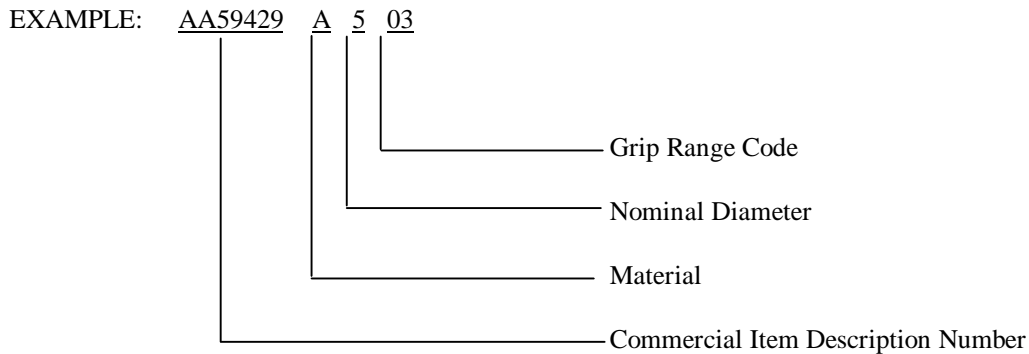
3.1 Product conformance. The products provided shall meet the salient characteristics of this commercial item description, conform to the producer's own drawings, specifications, standards, and the quality assurance practices, and be the same product offered for sale in the commercial market. The government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

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## 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 from Table III.



AA59429A503 Indicates - Rivet, blind, nonstructural, retained mandrel, open-end, 120<sup>0</sup> countersunk head, 5056 (UNS A95056) aluminum alloy body, C1006-C1038 (UNS G10060-G10380) steel mandrel; nominal body diameter size, .156; grip range, .120-.187.

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. 5320-0958)

# 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-59429**
**2. DOCUMENT DATE (YYMMDD)**  
**990420**
**3. DOCUMENT TITLE:**
**RIVETS, BLIND, NONSTRUCTURAL, RETAINED MANDREL, OPEN END, 120<sup>0</sup> COUNTERSUNK HEAD, ALUMINUM ALLOY, CARBON STEEL, NICKEL-COPPER ALLOY**
**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)**
**7. DATE SUBMITTED (YYMMDD)**
**(1) Commercial**
**(2) AUTOVON (If applicable)**
**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)**

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700 Robbins Avenue

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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