

[INCH-POUND]  
A-A-59997/1  
14 May 2019

COMMERCIAL ITEM DESCRIPTION  
SPECIFICATION SHEET

CONICAL SEALS, CRUSH, 24 DEGREE FLARED  
TUBE FITTING, ALUMINUM ALLOY

The General Services Administration has authorized the use of this commercial item description for all federal agencies.

The complete requirements for procuring conical seal, crush, 24 degree flared tube fitting, aluminum alloy described herein shall consist of this document and the issue in effect of A-A-59997.

CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN). This commercial item description (CID) uses a classification system which is included in the PIN as shown in the following example (see NOTES).

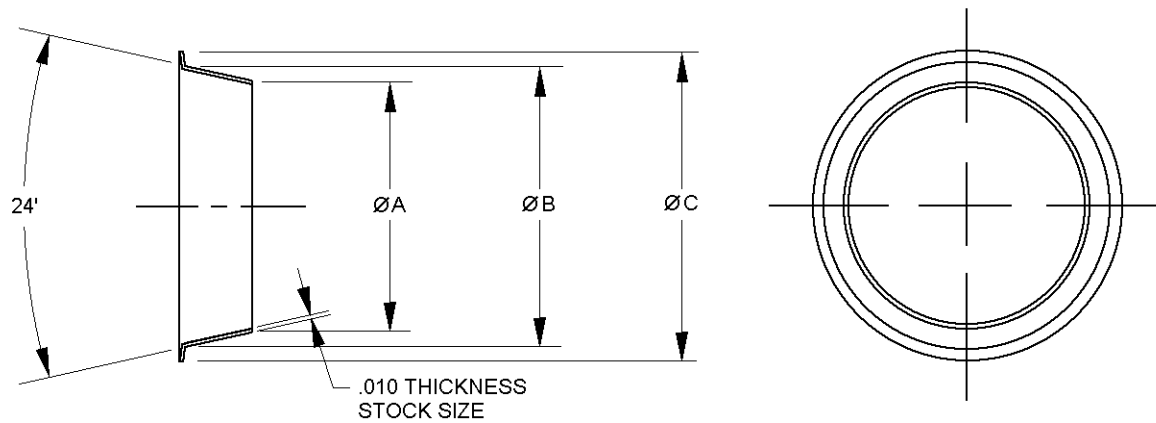
<u>AA59997/1</u>	<u>-04</u>	<u>A</u>
CID number	Size code (see figure 1)	Material and finish code (see table I)

SALIENT CHARACTERISTICS.

Interface and physical dimensions. Conical seals, crush, 24 degree flared tube fitting, aluminum alloy supplied to this CID specification sheet shall be as specified herein (see figure 1 and table I).

Beneficial comments, recommendations, additions, deletions, clarifications, etc., and any data that may improve this document should be sent to: DLA Land and Maritime, ATTN: VAI, P.O. Box 3990, Columbus OH 432180-3990, or [fluidflow@dlamail](mailto:fluidflow@dlamail). Since contact information can change you may want to verify the currency of the address information using the ASSIST Online database at <https://assist.dla.mil>.

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Dash size code	Tubing OD Ref.	A ±.002	B	C ±.003	T material size
-02	1/8	.137	.191	.247	.010
-03	3/16	.198	.269	.307	.010
-04	1/4	.236	.321	.362	.010
-05	5/16	.326	.384	.427	.010
-06	3/8	.388	.443	.477	.010
-08	1/2	.500	.603	.657	.010
-10	5/8	.625	.729	.772	.010
-12	3/4	.750	.853	.942	.010
-16	1	1.018	1.104	1.192	.010
-20	1-1/4	1.496	1.357	1.502	.010
-24	1-1/2	1.522	1.608	1.752	.010
-32	2	2.027	2.109	2.377	.010

## NOTES:

1. Dimensions are in inches.
2. Dimensioning and tolerancing in accordance with ASME Y14.5. Unless otherwise specified, tolerances for decimals  $\pm .005$  inch, angles  $\pm .5^\circ$ .
3. Break sharp edges and remove burrs and slivers.
4. Surface texture shall be .005 inches in accordance with ASME B46.1.
5. These parts are soft and easily deformed dimensions B, C, and D shall be verified by installing the seal on a standard fitting of the appropriate size.
6. An out-of-round-seal that does not interfere with installation shall not be cause for rejection.

FIGURE 1. 24° Flared crush seal.

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TABLE I. Material and finish code.

Material and finish code	Material and finish
A	Aluminum alloy, annealed, 1100 foil or sheet, condition "O" in accordance with QQ-A-1876, or ASTM B209, alloy 1100
AT	Aluminum alloy, annealed, 1100 foil or sheet, condition "O" in accordance with QQ-A-1876, or ASTM B209, alloy 1100. Tin plated in accordance with ASTM B545 or SAE-AMS2408

Tubing material and fluids to be sealed see table II.

TABLE II. Tubing material and fluids or gases.

Tubing and fitting material	Assembly temperature range	Fluids or gases
Aluminum	-420°F to +275°F (-251°C to 135°C)	Helium Hydraulic oil Hydrogen Peroxide Hydrazine Liquid hydrogen Liquid Nitrogen Nitric acid Oxygen Pneumatics Udimethyldrazine Water

Torque technique. These seals require a second torque technique; see A-A-59997 for torquing procedure.

## NOTES.

PIN. The PIN should be used for Government purposes to buy commercial products to this CID.

Source of documents.

## FEDERAL SPECIFICATIONS

QQ-A-1876 – Aluminum Foil.

## COMMERCIAL ITEM DESCRIPTIONS

A-A-59997 - Conical Seal, Crush, 24 Degree Flared Tube Fitting, General Requirements For

(Copies of these documents are available online at <https://quicksearch.dla.mil>.)

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## Other Publications

## ASME INTERNATIONAL

- ASME Y14.5 - Dimensioning and Tolerancing
- ASME B46.1 - Surface Texture (Surface Roughness, Waviness, and Lay)

(Copies of these documents are available online at <https://www.asme.org>.)

## ASTM INTERNATIONAL

- ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate
- ASTM B545 - Standard Specification for Electrodeposited Coatings of Tin

(Copies of these documents are available online at <https://www.astm.org>.)

## SAE INTERNATIONAL

- SAE-AMS2408 - Plating, Tin

(Copies of these documents are available online at <https://www.sae.org>.)

Commercial products. As part of the market analysis and research effort, this CID was coordinated with the following manufacturers of commercial products. At the time of CID preparation and coordination, these manufacturers were known to have commercial products that would meet the requirements of this CID. (NOTE: This information should not be considered as a list of approved manufacturers or be used to restrict acquisition to only the manufacturers shown.)

<u>Vendor CAGE number</u>	<u>Vendor name and address</u>
33447	SECO Seals Inc. 1370 Logan Ave. Unit K Costa Mesa, CA 92626 714-546-3778 E-mail: <a href="mailto:SECOseals@aol.com">SECOseals@aol.com</a>
64162.	Del Aerospace, Inc. 330-J South Kellogg Avenue Goleta, CA 93117 E-mail: <a href="mailto:delaero@earthlink.net">delaero@earthlink.net</a>

Part number (P/N) supersession data. These CID PINs supersede the following MFR's P/N's as shown in table III. This information is being provided to assist in reducing proliferation in the Government inventory system.

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TABLE III. P/N supersession data.

Dash number (see table I) AA59997/1	MFR's CAGE	MFR's P/N <u>1/</u>	MFR's CAGE	MFR's P/N <u>1/</u>
-02A	33447	SEC011A-02	64162	DY24-A-2
-03A	33447	SEC011A-03	64162	DY24-A-3
-04A	33447	SEC011A-04	64162	DY24-A-4
-05A	33447	SEC011A-05	64162	DY24-A-5
-06A	33447	SEC011A-06	64162	DY24-A-6
-08A	33447	SEC011A-08	64162	DY24-A-8
-10A	33447	SEC011A-10	64162	DY24-A-10
-12A	33447	SEC011A-12	64162	DY24-A-12
-16A	33447	SEC011A-16	64162	DY24-A-16
-20A	33447	SEC011A-20	64162	DY24-A-20
-24A	33447	SEC011A-24	64162	DY24-A-24
-32A	33447	SEC011A-32	64162	DY24-A-32

Dash number (see table I) AA59997/1	MFR's CAGE	MFR's P/N <u>1/</u>	MFR's CAGE	MFR's P/N <u>1/</u>
-02AT	33447	SECO11AT-02	64162	DY24-AT-2
-03AT	33447	SECO11AT-03	64162	DY24-AT-3
-04AT	33447	SECO11AT-04	64162	DY24-AT-4
-05AT	33447	SECO11AT-05	64162	DY24-AT-5
-06AT	33447	SECO11AT-06	64162	DY24-AT-6
-08AT	33447	SECO11AT-08	64162	DY24-AT-8
-10AT	33447	SECO11AT-10	64162	DY24-AT-10
-12AT	33447	SECO11AT-12	64162	DY24-AT-12
-16AT	33447	SECO11AT-16	64162	DY24-AT-16
-20AT	33447	SECO11AT-20	64162	DY24-AT-20
-24AT	33447	SECO11AT-24	64162	DY24-AT-24
-32AT	33447	SECO11AT-32	64162	DY24-AT-32

1/ The manufacturer's P/N shall not be used for acquisition to the requirements of this CID. At the time of preparation of this CID, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown.

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MILITARY INTERESTS:

Custodians:

Army - AV  
Navy - AS  
Air Force - 11  
DLA - CC

Review activities:

Army - AT, MI  
Navy - MC, SH  
Air Force - 71

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FAS

Preparing Activity:

DLA - CC

Project 4730-2019-011

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.