

INCH-POUND

A-A-59159A

3 JANUARY 2003

SUPERSEDING

A-A-59159

27 March 1998

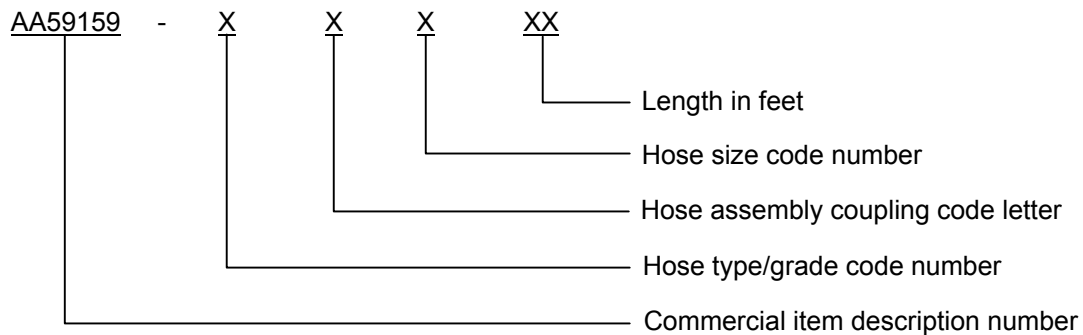
## COMMERCIAL ITEM DESCRIPTION

## HOSE AND HOSE ASSEMBLIES, RUBBER, STEAM

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

1. SCOPE. This CID covers the general requirements for reinforced rubber steam hose and hose assemblies for conveyance of saturated steam. Rubber steam hose and hose assemblies covered by this CID are intended for commercial/industrial steam applications but not to convey steam into food service equipment.

2. CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN). This CID uses a classification system which is included in the PIN as shown in the following example (see 7.1).



Beneficial comments, recommendations, additions, deletions, clarifications, and any data that may improve this document should be sent to: Defense Supply Center, Columbus, ATTN: DSCC VAI, P.O. Box 3990, Columbus, OH 43216 5000, or telephone (614) 692-0538, or facsimile (FAX) (614) 692-6939.

AMSC N/A

FSC 4720

DISTRIBUTION STATEMENT A. Approved for public release; distribution is unlimited.

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TABLE I. Type/grade, coupling, size and, length to PIN code cross reference.

Type/grade	PIN code
I/A	1
I/B	2
II	3
Coupling assembly	PIN code
Male one end/female other end	A
Male on both ends	B
Hose size	PIN code
0.5	1
0.75	2
1.0	3
1.25	4
1.5	5
2.0	6
2.5	7

2.1 Types. The hoses shall be of the following types and grades, as specified (see 7.4).

Type I – Braided wire reinforced construction.

Grade A – multiple braid reinforcement: for working pressure up to 200 pounds per square inch gage (psig) and temperatures up to 388 °F.

Grade B – Single braid reinforcement: for working pressures up to 100 psig and temperatures up to 320 °F.

Type II – Wrapped fabric construction; for working pressures up to 75 psig and temperatures up to 320 °F

### 3.0 SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Rubber steam hose and hose assemblies supplied to this CID shall be as specified herein.

#### 3.2 Description.

3.2.1 Type I. Type I hose shall be suitable for heavy-duty, high-pressure, shock-resistant, flexible steam applications.

Grade A hose shall be available in the following nominal sizes (ID in inches): 0.5, 0.75, 1.0, 1.25, 1.5, 2.0, and 2.5, and be suitable for working pressure and temperatures up to 200 psig and 388 °F.

Grade B hose shall be available in the following nominal sizes (ID in inches): 0.5, 0.75, and 1.0, and be suitable for working pressure and temperatures up to 100 psig and 320 °F.

3.2.2 Type II. Type II hose shall be suitable for general service as a steam hose for working pressures up to 75 psig and 320° F. Type II shall be available in the following nominal sizes (ID in inches): 0.5, 0.75, 1.0, 1.25, 1.5, and 2.0.

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3.2.3 Inside diameter. The inside diameter and tolerances shall be as specified in table II.

TABLE II. Inside diameter and tolerance, inch(es).

Type of hose	Inside diameter						
	0.500	0.750	1.000	1.250	1.500	2.000	2.500
Type I, grade A	+0.039 -0.016	+0.039 -0.016	+0.047 -0.016	+0.063 -0.016	+0.063 -0.016	+0.063 -0.016	+0.078 -0.016
Type I, grade B	+0.039 -0.016	+0.039 -0.016	+0.047 -0.016	-	-	-	-
Type II	±0.031	±0.031	±0.031	±0.031	±0.031	±0.063	-

3.2.4 Length. Hose length shall be 50 feet (+ 6 inches, - 0 inches) excluding couplings, unless otherwise specified in the contract or order (see 7.4.d).

3.3 Construction. The hose shall be constructed of a heat and ozone resistant cover. Type I hose shall have reinforcement to withstand shock, vibration, and flexing. Treatment may be applied to the reinforcement to increase the adhesion to the heat resistant tube. The construction specified represents minimum requirements and is not intended to bar hose having improved properties that exceed the requirements of this specification.

3.4 Couplings. When specified, the hose shall be fitted with couplings. Couplings shall be of the long shank, interlocking clamp type, having fingers or lugs on each half of the clamp to grip a collar on the stem. The coupling shall consist of a stem with a serrated or grooved shank end, a raised continuous collar, and a two-part interlocking-type clamp with clamping bolts. Hose smaller than 1.00 inch ID shall be provided with not less than two clamping bolts; all other couplings shall have four clamping bolts. Two male couplings or one female and one male coupling shall be provided, as specified in the contract or order. Components, except washers and soft metal contact surface inserts, shall be protected with a corrosion-resisting coating (see 7.4c).

3.5 Physical requirements. The hose shall meet the minimum requirements specified in table III when tested in accordance with ASTM D380, Standard Test Methods for Rubber Hose.

TABLE III. Physical properties.

Property	Inside diameter, nominal (inches)						
	0.5	0.75	1.0	1.25	1.5	2.0	2.5
Hydrostatic proof pressure, minimum, psig							
Type I, grade A	1250	1250	1250	1250	1250	1250	1250
Type I, grade B	900	900	900	$_{-1}^{\prime}$	$_{-1}^{\prime}$	$_{-1}^{\prime}$	$_{-1}^{\prime}$
Type II	400	400	400	350	350	300	-
Hydrostatic burst pressure, minimum, psig							
Type I, grade A	2000	2000	2000	2000	2000	2000	2000
Type I, grade B	1800	1800	1800	$_{-1}^{\prime}$	$_{-1}^{\prime}$	$_{-1}^{\prime}$	$_{-1}^{\prime}$
Type II	875	875	875	800	800	750	-

Note 1: Sizes larger than 1 inch inside diameter for Type I, grade B hose are not considered structurally sound.

3.5.1 Type I. When pressurized to burst pressure, Type I hose shall have no more than one rotation or twist of 360° within 50 feet or exceed ± 4% change in length.

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3.6 Identification marking. Each length of hose shall be marked in a color that contrasts with the color of the hose cover. Marking shall be accomplished either by in-laying a rubber or suitable material brand or by applying a suitable composition ink, bonding the marking onto the cover so that the marking cannot be removed except by mechanical means. The marking shall consist of the manufacturer's name or trademark, the quarter and year of manufacture, the working pressure, and the word "steam". An alternative method of marking may be by the application of a continuous embossed strip along the entire length, vulcanizing the hose and by the subsequent removal of the strip, leaving a continuous relief identification area. Identification shall be the manufacturer's name or trademark, the working pressure, and the word "steam" repeated at maximum intervals of 36 inches. When the marking is accomplished by this alternative method, no color contrast is required. Letters shall be a least 0.25 inches high.

3.6.1 Marking tag. A marking tag shall be secured to the hose near each end fitting (two tags per length of hose), advising users of all safety precautions to be followed in the use of the hose.

The following shall be included on the tag:

- a. Hose clamps shall be checked for proper application and shall be re-tightened, as necessary, prior to being placed into service. Be sure that clamps are interlocked over the collar on the nipple and that each clamp half interlocks with the other.
- b. Hose clamps shall be tightened after the first several hours of steaming of the hose and periodically thereafter.
- c. The importance of taking up evenly on all bolts to prevent cocking of the hose clamp shall be emphasized.
- d. Other operational and maintenance suggestions considered necessary by the hose and end-fitting manufacturers.

3.7 Materials. Materials used shall be free from defects that would adversely affect the performance or maintainability of individual components or of the overall assembly. Materials not specified herein shall be of the same quality used for the intended purpose in commercial practice. The term "recovered materials" (see 4.1) means materials that have been collected or recovered from solid waste and reprocessed to become a source of raw materials, as opposed to virgin raw materials. None of the above shall be interpreted to mean that the use of used or rebuilt products is allowed under this specification unless otherwise specified (see 7.4).

3.8 Workmanship. The quality of workmanship shall be such as to produce hose and hose assemblies that are in accordance with the requirements of this CID.

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered material to the maximum extent practicable, in accordance with paragraph 23.403 of the Federal Acquisition Regulation (FAR) (see 3.7).

4.1 Metric products. Products manufactured to metric dimensions will be considered on an equal basis with those manufactured using inch-pound units, provided: they fall within the tolerances specified using conversion tables contained in the latest revision of IEEE SI-10; and all other requirements of this CID including form, fit and function are met. If a product is manufactured to metric dimensions and those dimensions exceed the tolerances specified in the inch/pound units, a request should be made to the contracting officer to determine if the product is acceptable. The contracting officer has the option of accepting or rejecting the product.

## 5. PRODUCT CONFORMANCE PROVISIONS.

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

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6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or purchase order (see 3.5 and 7.4).

7. NOTES.

7.1 PIN. The PIN should be used for Government purposes to buy commercial products to this CID. See section 2 for PIN format example.

7.2 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these hoses and hose assemblies to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

7.3 Source of documents.

Federal Acquisition Regulations

- FAR 23.403 - Environment, Conservation, Occupational Safety, And Drug-Free Workplace; Use Of Recovered Materials; Policy

(The Federal Acquisitions Regulations may be obtained from the Superintendent of Documents, U. S. Government Printing Office, Washington, DC 20402 or from the internet at <http://www.arnet.gov/far/>.)

Non-Government publications

Institute of Electrical and Electronic Engineers (IEEE)

- IEEE SI-10 - International System of Units (SI): The Modern Metric System

(Copies of IEEE standards are available from the Institute of Electrical and Electronic Engineers, 445 Hoes Lane, Piscataway, New Jersey, 08855-1331.)

American Society for Testing and Materials (ASTM)

- ASTM D380 - Standard Test Methods for Rubber Hose

(Copies of ASTM standards are available from the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

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7.4 Ordering Data. Acquisition documents should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Type, grade, and size of hose required (see 2.1).
- c. When couplings are required, type of couplings, and material (see 3.4).
- d. Length of hose required if other than 50 feet as specified in 3.2.4.
- e. Level of preservation-packaging and level of packing required (see 6.1).
- f. Use of recovered materials, or of used or rebuilt products, if other than specified (see 3.7 and 4.1).

7.5 Commercial products. As part of the market analysis and research effort, this CID was coordinated with the manufacturers (MFRs) of commercial products listed in table IV. 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 procurement to only the manufacturers shown.)

TABLE IV. MFR's contact information.

MFR's CAGE	MFR's contact information
079J5	4 Star Air Hydraulic And Industrial Hose And Supply Inc 10704 Composite Dr Dallas, TX 75220-1208 Telephone: (214) 351-6085 FAX: (214) 351-0904
61125	J G B Enterprises 115 Metropolitan Dr Liverpool, NY 13088 Telephone: (315) 451-2770 FAX: (315) 453-7535
8W529	The Smith W H Hardware Co RT 95 W PO Box 599 Parkersburg, WV 26102-0599 Telephone: (304) 422-6578 FAX Telephone: (304) 422-6540
5P739	Drive Train Industries Inc 3301 Brighton Blvd Denver, CO 80216 Telephone: (303) 292-1100 FAX: (303) 297-0473
5X956	Intermountain Industrial Supply Inc 8040 NE 33rd DR Portland, OR 97211 Telephone: (503) 281-4673 FAX: (503) 281-5845

7.6 Part number (P/N) supersession data. The CID part numbers supersede the MFR's P/Ns as shown in table V when available (see note below table). This information is being provided to assist in reducing proliferation in the Government inventory system.

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TABLE V. P/N supersession data.

Dash number (see table I) AA59159-	MFR's CAGE	MFR's P/N <sup>1/</sup>	MFR's CAGE	MFR's P/N <sup>1/</sup>	MFR's CAGE	MFR's P/N <sup>1/</sup>
1A150						
1A250						
1A350						
1A450						
1A550						
1A650						
1A750						
1B150						
1B250						
1B350						
1B450						
1B550						
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3A250						
3A450						
3A450						
3A550						
3A650						
3B150						
3B250						
3B350						
3B450						
3B550						
3B650						

Note: <sup>1/</sup> The manufacturer's P/N shall not be used for procurement to the requirements of this CID. At the time of preparation of this CID revision, no supplier or manufacturer responded to the survey to include their commercial products in this CID. For actual part marking requirements see 3.6.

7.7 Government users. To acquire information on obtaining these rubber steam hoses or hose assemblies from the Government inventory system, contact Defense Supply Center, Columbus, ATTN: DSCC Call Center (DSCC-NAB), Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-2271 or -3191.

7.8 Subject term (key word) listing.

Clamps  
Collar  
Nipple  
Reinforced hose  
Saturated  
Steaming

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MILITARY INTERESTS:

Custodians:

Army – AT  
Navy – SH  
Air Force – 99  
DLA – CC

Review activities:

Navy – SA  
Air Force – 03, 71

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA – FSS

Preparing activity:

DLA - CC

(Project 4720-0341)