[INCH-POUND]
A-A-59613
August 16, 2001
SUPERSEDING
ZZ-H-521F
May 28, 1993

COMMERCIAL ITEM DESCRIPTION

HOSE AND HOSE ASSEMBLIES, NONMETALLIC SPRAY

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

1. SCOPE. This CID covers the general requirements for nonmetallic, spray hose and hose assemblies. The hose and hose assemblies covered by this CID are intended for commercial/industrial applications.

2. CLASSIFICATION. This CID uses a classification system which is included in the Part Identification Number (PIN) as shown in the following example (see 7.1).

AA59613	-	025	-	120
CID number		Hose size code (see 2.1)		Length (inches) (see 3.2.2)

2.1 Hose size code. Table I lists the hose size codes that shall be used in the PIN.

TABLE I. Hose size code.

Hose ID (in)	0.25	0.31	0.38	0.50	0.75	1.00
Hose size code	025	031	038	050	075	100

3. SALIENT CHARACTERISTICS.

3.1 Description. The operating pressure of the spray hose and hose assemblies supplied to this CID shall be 200 psi. The hose shall meet the requirements specified herein and in table II.

3.1.1 Wrapped hose. Wrapped hose shall consist of a smooth bore tube (see 3.3), reinforced with two or more wrapped plies of cotton or synthetic fiber yarn or cord and encased within a smooth cover (see 3.4).

3.1.2 Braided hose. Braided hose shall consist of a smooth bore tube (see 3.3), reinforced with one or more braids of cotton or synthetic fiber yarn or cord and encased within a smooth cover (see 3.4).

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

AMSC N/A FSC 4720

TABLE II. Performance requirements.

Property		Requirement			Test Method
Solvent resistance	Tube	After immersion in ethyl acetate	No dissolution; ≤ 5% volume decrease	≤30% volume increase	ASTM D471
		After immersion in acetone			
		After immersion in distilled water		≤6 % volume increase	
	Cover	After immersion in ASTM D 471, reference fuel D	≤ 100% volume increase		
Extraction	Tube	After immersion in ethyl acetate	≤ 8% by weight		FED-STD-601, method 6511 (dried at 122 ± 4°F)
		After immersion in acetone	≤ 20% by weight		
		After immersion in distilled water	≤ 6% by weight		
Ozone resistance	Cover	No breaks or cracks			ASTM D1149
Tensile strength	Tube	Before aging	≥ 800 psi		Perform tensile & elongation before and after aging in accordance with ASTM D 412, D 638 or D 882 as applicable. Age according to ASTM D 573 except that exposure shall be at 212°F for 70 hours. Perform tensile & elongation after immersion in accordance With ASTM D 471.
		After aging	≤ 35% decrease in strength		
		After immersion in ASTM D 471, reference fuel D	≥ 500 psi		
	Cover	Before aging	≥ 1250 psi		
		After aging	≤35 % decrease in strength		
		After immersion in ASTM D 471, reference fuel D	≥ 650 psi and ≤ 50% decrease in strength		
Elongation	Tube	Before aging	≥ 200%		
		After aging	≤ 55% decrease in elongation		
		After immersion in ASTM D 471, reference fuel D	≤ 40% decrease in elongation		
	Cover	Before aging	≥ 250%		
		After aging	≤ 55% decrease in elongation		
		After immersion in ASTM D 471, reference fuel D	≤ 45% decrease in elongation		
Adhesion	Tube to plies	≥ 6 piw			ASTM D 413 for ring type specimen
	Between plies	≥ 10 piw			
	Cover to plies	≥ 6 piw			
Proof pressure 1/	Hose without couplings	Tested at 400 psi for 1 minute	No leakage or rupture		ASTM D 380
	Hose with couplings	Tested at 400 psi for 2 minute	No leakage or rupture		
Burst pressure	Hose	≥ 800 psi			

1/ Bulk hose may be proof tested in production lengths. Proof pressure for hose with couplings shall be performed only when couplings are ordered with hose.

3.1.3 Helically wound (spiral) hose. Helically wound hose shall consist of a smooth bore tube (see 3.3), reinforced with two or more spirally wound plies of cotton or synthetic fiber yarn or cord and encased within a smooth cover (see 3.4).

3.2 Physical dimensions. Hose and hose assemblies supplied to this CID shall be specified herein.

3.2.1 Hose ID. Tolerances on the ID of a 1.00 inch hose size (see 2.1) shall be ± 0.06 inch. Tolerances on the ID of all other sizes shall be ± 0.03 inch.

3.2.2 Length. Hose shall be furnished in lengths as specified in the contract or in the purchase order (see 7.4); however the length of any one hose shall not be greater than 50 ft. Measurement of hose length shall be in accordance with ASTM D 380. Tolerances on the length of a hose shall not be greater than ± 1%. When hose assemblies are required, lengths of the couplings shall not be considered as part of the hose length.

3.3 Tube. The tube shall be of either a thermoplastic material or a synthetic rubber compound and shall meet the requirements specified herein and in table II.

3.4 Cover. The cover shall be of a synthetic rubber compound that is no less than 0.023 inch thick and shall meet the requirements specified herein and in table II. When testing for ozone resistance, condition the stretched specimens for 24 hours in an ozone free atmosphere followed by a 72 hours exposure at 104 ± 3°F in an atmosphere containing 50 parts per hundred million of ozone.

3.5 Couplings. When required by the contract or by the purchase order (see 7.4), coupling threads shall be in accordance with FED-STD-H28. The maximum permissible bulge of the inner tube shall not be greater than the values specified in table III (see figure 1).

TABLE III. Permissible bulge.

Hose size (in)	Hose ID at bulge, min (in)
0.25	0.20
0.31	0.26
0.38	0.33
0.50	0.45
0.75	0.70
1.00	0.90

3.6 Blockage. When rolled or blown by low pressure, a steel ball that is 0.125 inch smaller than the nominal hose ID shall freely pass through the entire length of the hose.

3.7 Markings. The cover on each length of hose shall be clearly marked with the manufacturer's name or recognized trademark along with the word "SPRAY" and the quarter and year in which the hose was produced. For example, if the hose was produced during the second quarter of the year 2001, the quarter and year shall be displayed as "2Q01". Letter height shall be ≥ 0.12 inch. The markings on each length of hose shall be repeated at approximately every 3 ft. intervals.

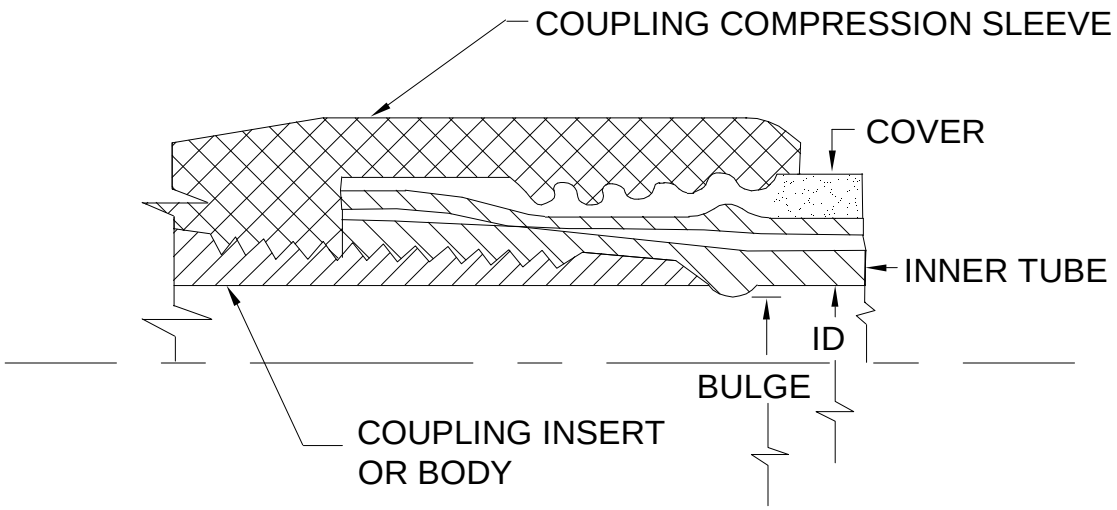

FIGURE 1. Hose dimensions.

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

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 market. The Government reserves the right to require proof of such conformance.

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or purchase order.

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 this hose and hose assembly to DSCC under the Military Parts Control Advisory Group (MPCAG) evaluation program, Cage code 58536 should be used.

7.3 Source of documents.

Federal Standard

FED-STD-H28	-	Screw-Thread Standards for Federal Services
FED-STD-601	-	Rubber: Sampling and Testing

(Copies of federal specifications and standards are available from the Document Automation and Production Service, Building 4/D (DPM-DODSSP), 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

Other Publications

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D 380	-	Standard Test Methods for Rubber Hose (DoD adopted)
ASTM D 412	-	Standard Test Methods for Vulcanized Rubber and Thermoplastic Rubbers and Thermosplastic Elastomers (DoD adopted)
ASTM D 413	-	Standard Test Methods for Rubber Property - Adhesion to Flexible Substrates (DoD adopted)
ASTM D 471	-	Standard Test Method for Rubber Property - Effect of Liquids (DoD adopted)
ASTM D 573	-	Standard Test Method for Rubber - Deterioration in an Air Oven (DoD adopted)
ASTM D 638	-	Standard Test Method for Tensile Properties of Plastics (DoD adopted)
ASTM D 882	-	Standard Test Method for Tensile Properties of Thin Plastic Sheeting (DoD adopted)
ASTM D 1149	-	Standard Test Method for Rubber Deterioration -Surface Ozone Cracking in a Chamber (DoD adopted)

(Application for copies should be addressed to the American Society for Testing and Materials, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959).

FEDERAL ACQUISITION REGULATIONS (FAR)

FAR, para. 23.403	-	Federal Acquisition Regulation

(Application for copies should be addressed to the U.S. Government Printing Office, North Capitol and H streets NW, Washington, DC 20402.)

7.4 Ordering data. The contract or the purchase order should specify the following:

a. CID document number, revision, and CID PIN (see section 2).
b. Length required (see 3.2.2).
c. Type of couplings, if required (see 3.5).
d. Product conformance provisions (see 5.1).
e. Packaging requirements (see section 6).

7.5 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 procurement to only the manufacturers shown.)

MFR's CAGE	MFR's name and address
3T337	Royal Brass 1470 Amherst Road Knoxville, TN 37909 Phone number: 1-865-558-0224 Fax number: 1-865-558-8484
5X956	Intermountain Industrial Supply 8040 NE 33rd Drive Portland, OR 97211 Phone number: 1-503-281-4673
61125	J G B Enterprises 115 Metropolitan Drive Liverpool, NY 13088 Phone number: 1-315-451-2770 Fax number: 1-315-453-7535

7.6 Part number (P/N) supersession data. These CID part numbers supersede the following Federal specification part numbers as shown. This information is being provided to assist in reducing proliferation in the Government inventory system.

TABLE V. P/N data.

Part number (See section 2)	Superseded part number	MFR's CAGE	MFR's P/N 1/	NSN 2/
AA59613-025-XXX	ZZH521-025-XXX			
AA59613-031-XXX	ZZH521-031-XXX			
AA59613-031-600	ZZH521-031-600	61125		4720-00-277-8976
AA59613-038-XXX	ZZH521-038-XXX			
AA59613-038-300	ZZH521-038-300	3T557		4720-00-289-3429
		5X956		
		61125		
AA59613-038-300	ZZH521-038-300	61125		4720-00-356-8582
AA59613-050-XXX	ZZH521-050-XXX			
AA59613-075-XXX	ZZH521-075-XXX			
AA59613-100-XXX	ZZH521-100-XXX			

1/ 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, the aforementioned commercial products were reviewed and could be replaced by the CID PIN shown. For actual part marking requirements see 3.7.

2/ NSNs may reflect differentiation between a hose and an assembly or between the types and materials of the attached couplings.

7.7 Government users. To acquire information on obtaining these compressors from the Government inventory system, contact one of the following Defense Supply Center Columbus' codes: DSCC-ADB, DSCC-LDA, or DSCC-MEA, Post Office Box 3990, Columbus, OH 43216-5000, or telephone (614) 692-3869, (614) 692-3719, or (614) 692-2079, respectively.

7.7.1 National stock number (NSN). Table V includes a list of NSN's assigned which correspond to this CID. The list is for information only and may not be indicative of all possible NSN's associated with the CID. For up to date information on assigned NSN's, please contact the aforementioned DSCC office (see 7.7).

MILITARY INTERESTS:

Custodians:
Air Force - 99
Army - AT
Navy - SH
DLA - CC

Review activities:
Air Force - 71
Navy - CG, MC, SA

CIVIL AGENCY COORDINATING ACTIVITY:

GSA/FSS

Preparing activity:
DLA - CC

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