

INCH-POUND

A-A-59270A

6 January 2003

SUPERSEDING

A-A-59270

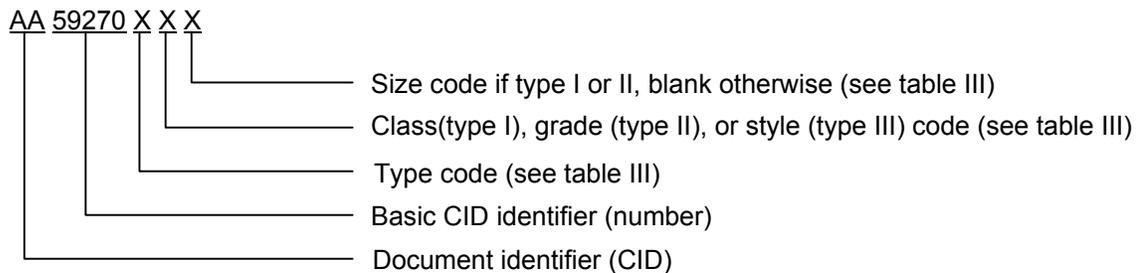
21 July 1998

COMMERCIAL ITEM DESCRIPTION

HOSE AND HOSE ASSEMBLIES, NON-METALLIC (RUBBER, PLASTIC)

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 requirement for hose and hose assemblies made from either plastic or rubber for use in gardening, nurseries, or factory grounds maintenance, general purpose rubber hose, and soaker hoses. Hose and hose assemblies covered by this CID are intended for commercial/industrial applications.
2. CLASSIFICATION/PART OR IDENTIFICATION NUMBER (PIN). This CID uses a classification system that is included in the PIN as shown in the following example (see 7.1).



Beneficial comments recommendations, additions, deletions, clarifications 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

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

FSC 4720

TABLE I. Type, class, grade, style, and size to PIN code cross reference.

Type	PIN code	
I	A	
II	B	
III	C	
Class		Applicable to Type 1 only
1	1	
2	2	
Grade		Applicable to Type II only
A	3	
B	4	
Style		Applicable to Type III only
1	5	
2	6	
Size		
1/2	A	Applicable to Type II only
5/8	B	Applicable to Type I and II only
3/4	C	

2.1 Hose, hose assemblies, and soaker hoses. Hose, hose assemblies, and soaker hoses shall be of the following types, classes, grades, sizes, and styles as specified (see 7.4).

Type 1 - Rubber, yarn-reinforced hose.

Class 1 - 125 pounds per square inch (psi) working pressure.

Class 2 - 200 psi working pressure.

Size 5/8 - 0.625 inch inside diameter (ID).

Size 3/4 - 0.750 inch ID.

Type II - Plastic hose.

Grade A - Yarn reinforced.

Grade B - Non-reinforced.

Size 1/2 - 0.500 inch ID.

Size 5/8 - 0.625 inch ID.

Size 3/4 - 0.750 inch ID.

Type III - Soaker hose, rubber or plastic (see 3.3.3)

Style 1 - Soaker hose with both male and female couplings.

Style 2 - Soaker hose with a female coupling and an end-closure.

3.0 SALIENT CHARACTERISTICS.

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

3.2 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. Unless otherwise specified herein, all equipment, material, and articles incorporated in the work covered by this specification are to be new and fabricated using materials produced from recovered material to the maximum extent possible without jeopardizing the intended use. The term "recovered materials" 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).

3.2.1 Rubber. The basic compound shall be natural rubber, synthetic rubber, or a mixture of natural and synthetic rubber. All rubber, tubes and covers, shall resist aging.

3.2.2 Plastic. The plastic compound used in the construction of type II, regular hose, and type III, soaker hose, shall be based on resins made by the polymerization of vinyl chloride or copolymerization of vinyl chloride with minor amounts (not over 50 percent) of other unsaturated compounds, suitably plasticized and pigmented.

3.2.3 Yarns. Reinforcement yarns shall be staple or filament yarns, braided, knitted, or spiral wound.

3.3 Construction.

3.3.1 Type I. Type I hose shall consist of an all rubber tube and a cover which resists aging and abrasion. Reinforcement shall consist of a braided, knitted or spiral wound cord, for single or double reinforcement.

3.3.2 Type II. Grade A hose shall consist of a plastic tube, a braid or other yarn type belted radial reinforcement and an opaque cover. Grade B hose shall be a plastic tube and cover fused together so that manual separation is not possible.

3.3.3 Type III. Soaker hose shall have a wall thickness of not less than 0.012 inch. The hose shall consist of two or more contiguous chambers of such a profile to ensure the hose will lie flat when in use. Soaker openings shall be uniform in size and evenly distributed along the length of each hose. The hose material shall be rubber or plastic in accordance with 3.2.1 or 3.2.2 as specified (see 7.4b).

3.4 Lengths. Unless otherwise specified (see 7.4) hose and hose assemblies shall be furnished in standard commercial 25-, 50-, 75-, and 100-foot lengths, excluding couplings. Soaker hoses shall be furnished in 25- and 50-foot lengths.

3.5 Diameters. The ID of the hose shall be as specified for the nominal size (see 2.1).

3.6 Fittings (couplings and end cap). Unless otherwise specified (see 7.4), all hose assemblies shall be furnished with commercial type fittings of brass or die casting of zinc base alloys as hereafter specified, attached to the ends. Zinc base alloy die castings shall have a corrosion resisting coating.

3.6.1 Type I class 1, type II, and type III style 1 hose assemblies. Couplings for type I class 1, type II, and type III style 1 hose assemblies shall be male on one end and female on the other. The male end of type III style 1 hose assemblies shall be furnished with a removable cap. A suitable washer may be inserted in the female coupling or may be secured to the hose.

3.6.2 Type I class 2 hose assemblies. Couplings for type I class 2 hose assemblies shall be male on one end and female on the other. A rubber washer shall be inserted in the female end or may be secured to the hose. Couplings shall be machined or cast brass. Couplings shall be short shank secured with a

crimped ferrule, or shall be internal expansion type. The coupling bore shall be full size offering no restriction to the flow of water.

3.6.3 Type III, style 2. Type III style 2 soaker hose shall have a female coupling and rubber washer on one end. The other end shall have an end-closure fitting accomplished by mechanical means, which shall remain in place, or shall be permanently sealed to form an end closure. The mechanical type end closure shall be removable and replaceable without the aid of tools.

3.7 Threads. Threads on hose fittings shall be the garden hose type described in FED-STD-H28, except that the thread form and number of threads per coupling shall be in accordance with the manufacturer's standard commercial product.

3.8. Physical requirements. Hose shall meet the physical requirements specified in table I. Hose and hose assemblies shall not break or crack when subjected to the temperatures specified in table II.

TABLE II. Physical requirements.

Physical requirements	Type I		Type II		Type III	Test procedure, ASTM
	Class 1	Class 2	Grade A	Grade B		
Pressures, psi:						
Maximum operating	125	200	-	-	-	-
Hydrostatic proof test	150	400	150	100	-	D380
Hydrostatic burst test	500	800	300	200	-	D380
(Adhesion between all components)						
Friction, minimum, pounds	6	6	-	-	-	D380
Tensile strength before aging, minimum, psi						
Tube	500	500	-	-	-	D412
Cover	500	500	-	-	-	D412
Tensile strength after aging for 70 hours at 158±5 °F IAW ASTM D573, minimum, percent						
Tube	60	60	-	-	-	D412
Cover	60	60	-	-	-	D412
Ultimate elongation before aging, minimum, percent						
Tube	150	150	-	-	-	D412
Cover	150	150	-	-	-	D412
Ultimate elongation after aging for 70 hours at 158±5 °F IAW ASTM D573, minimum, percent						
Tube	60	60	-	-	-	D412
Cover	60	60	-	-	-	D412
Low temperature flexibility	-40±5 °F ^{1/}	-40±5 °F ^{1/}	32 °F ^{1/}	41 °F ^{1/}	32 °F ^{2/}	-

Notes: ^{1/} Condition a new specimen of hose at least 24 inches long at the temperature specified for 5 hours. Bend the conditioned sample through 180° around a mandrel with an outside diameter of 10 times the ID of the hose within a time period not to exceed 8 seconds. After bending and allowing to return to 70±5 °F , the sample shall be hydrostatically tested at 100 psi for a period of 1 minute. Release the pressure and examine the test specimen for cracks or breaks. The specimen shall show no cracks or breaks. Failure to pass this test shall be cause for rejection of the entire lot.

^{2/} A hose specimen approximately 18 inches long shall be exposed to a temperature of 32±2 °F for 4 hours in low temperature cabinet or room. At the end of the exposure period, the hose shall be bent through an arc of 180° around 3.00±0.13 inch diameter mandrel at a uniform rate in approximately 5 seconds. The bending and exposure of the specimen shall take place in

the same atmosphere. The specimen shall show no cracks or breaks. Failure to pass this test shall be cause for rejection of the entire lot.

3.9 Coupling requirements. Couplings shall not slip, rupture, or blow off of the hose when 150 pounds or less is axially applied to the couplings. A representative 12 inch length of hose shall be selected and assembled with male and female couplings conforming to this specification. Couplings shall be attached to the 12 inch sample in accordance with the manufacturer's standard practice. A 150 pound load shall be applied using a suitable tensile test machine or by application of a dead weight. The load shall be held for a period of 1 minute minimum. Slippage of the coupling in excess of 0.063 inch, complete pull out, or rupture of the hoses shall be considered a failure.

3.9.1 Type I class I and type II hose assemblies. Following successful completion of the 150 pound loading test, type I class I and type II assemblies shall be pressurized to 100 psi and checked for leaks. Any leak, further movement of the coupling or blowout shall be considered a failure. The lot represented by the test specimen shall be rejected. The coupling assembly shall not leak when subjected to a minimum of 100 psi following the successful axial pull test.

3.10 Marking. Hose and hose assemblies supplied to this CID shall be permanently and legibly marked by commercial methods with the manufacturer's standard commercial PIN.

3.11 Workmanship. The hose shall be free of blisters, buckled plies, cracks, laps, and porosity. Couplings shall be free of cracks, dented surfaces, and sharp edges. Uncoupled hose in bulk quantities, if specified, shall be free from any defects in workmanship and materials that may limit the use for professional lawn and garden work or the function of heavy-duty water hose.

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).

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/ASTM 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.

5.2 Responsibility for inspection. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements (examinations and tests) as specified herein. Except as otherwise specified in the contract or purchase order, the contractor may use his own or any other facilities suitable for the performance of the inspection requirements unless disapproved by the Government. The Government reserves the right to perform any of the inspections set forth in the specification where such inspections are deemed necessary to assure supplies and services conform to prescribed requirements.

5.3 Examination. Examination regarding testing to determine conformance to salient characteristics shall be accomplished by subjecting sample specimens to the tests and methods specified in table I. Unless otherwise specified (see 7.4), sampling shall be in accordance with 5.3.1. Any modification necessary following failure to meet the specified requirements shall receive particular attention for adequacy and

suitability. This element of inspection shall encompass all examinations of material, configuration, performance, preservation, packaging, packing, marking, and labeling requirements. Non-compliance with any specified requirement, or the presence of one or more defects, shall constitute cause for rejection of the entire lot.

5.3.1 Sample. Unless otherwise specified (see 7.4), the sample shall consist of that number of randomly selected units of product specified in table III.

TABLE III. Inspection sample.

Production lot size ^{1/}	Sample size
1	1
2 to 8	2
9 to 15	3
16 to 25	5
26 to 50	8
51 to 90	13
91 to 150	20
151 to 280	32
281 to 500	50
501 to 1,200	80
1,201 to 3,200	125
3,201 to 10,000	200
10,001 to 35,000	315

Note: ^{1/} Lot size will be based on number of reels, spools, or coils of product.

5.3.2 Specimens. Specimens for inspection shall be taken from each unit of product that forms part of the sample. A specimen shall be a length of hose drawn from a unit of product.

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

7. NOTES.

7.1 PIN. The following PIN procedure is for government purposes to buy commercial products to this CID. The PIN shall be constructed as follows (note that spaces in the PIN are for clarity only and that spaces must not be used in creating the actual part number):

7.1.1 The PIN AA59270B4A listed in section 2 specifies a plastic garden hose (B) with no reinforcement (4) that has a 1/2 inch inside diameter (A).

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.

7.3.1 Non-Government publications.

AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM D380 - Standard Test Methods for Rubber Hose

ASTM D412	-	Standard Test Methods for Vulcanized Rubber and Thermoplastic Elastomers-Tension
ASTM D573	-	Rubber – Deterioration in an Air Oven

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

INSTITUTE OF ELECTRICAL AND ELECTRONIC ENGINEERS (IEEE)

IEEE/ASTM SI-10	-	International System of Units (SI): The Modern Metric System
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Copies of IEEE standards are available from the Institute of Electrical and Electronic Engineers, 445 Hoes Lane, Piscataway, New Jersey, 08855-1331.

(Industry association specifications and standards are generally available for reference from libraries. They are also distributed among technical groups and using Federal agencies.)

7.3.2 Government publications.

FEDERAL STANDARDS

FED-STD-H28	-	Screw-Thread Standards For Federal Services
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Unless otherwise indicated, copies of the above standard is available from the Defense Automation and Production Service, DoDSSP, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.

FEDERAL ACQUISITIONS REGULATIONS

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

7.4 Ordering Data. Acquisition documents should specify the following:

- a. CID document number, revision, and CID PIN.
- b. Type, class, grade, style, material if type III (see 3.3.3) and size (as applicable) required (see 2.1)
- c. Length required (see 3.4)
- d. Coupling if other than specified (see 3.6).
- e. Use of recovered materials, or of used or rebuilt products, if other than specified (see 3.2).
- f. Sampling plan, if other than as specified (see 5.3.1).
- g. Packaging requirements (see 6.).

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 data.

MFR's CAGE	MFR's name and contact information
1V630	F AND R SALES INC DBA MCCAFFREY AND ASSOICATES 109 GAUNTT ST PO Box 189 BURLINGTON, NJ 08016 Voice Telephone: 609-387-7722 FAX Telephone: 609-387-7744
61125	J G B ENTERPRISES 115 METROPOLITAN DR LIVERPOOL, NY 13088 Voice Telephone: 315-451-2770 FAX: 315-453-7535
21868	HBD INDUSTRIES INC BELLEFONTAINE WKS 1301 W SANDUSKY AVE BELLEFONTAINE, OH 43311-1057 Voice Telephone: 937-593-5010 FAX Telephone: 937-593-4354
1U339	LABARGE PRODUCTS INC 2900 BRANNON AVE SAINT LOUIS, MO 63139-1440 Voice Telephone: 314-776-2900 FAX Telephone: 314-776-6444

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

TABLE V. P/N supersession data.

Dash number (see table 1) AA59270-	MFR's CAGE	MFR's P/N ^{1/}	MFR's CAGE	MFR's P/N ^{1/}
A1B	61125	041-AA59270-A1B	21868	5411-10150
A1C	61125	041-AA59270-A1C	21868	5411-12150
A2B	61125	041-AA59270-A2B		
A2C	61125	041-AA59270-A2C		
B3A	61125	041-AA59270-B3A		
B3B	61125	041-AA59270-B3B		
B3C	61125	041-AA59270-B3C		
B4A	61125	041-AA59270-B4A		
B4B	61125	041-AA59270-B4B		
B4C	61125	041-AA59270-B4C		
C5	61125	041-AA59270-C5		
C6	61125	041-AA59270-C6		

^{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 3.10.

7.7 Government users. To acquire information on obtaining these 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.

Garden hose
Soaker hose
Nurseries
Gardening
Grounds maintenance
Water hose

MILITARY INTERESTS:

Custodians:

Navy - SH
DLA - CC

Review activities:

Navy - CG, SA

CIVIL AGENCY COORDINATING ACTIVITIES:

GSA - FSS

Preparing activity:

DLA - CC

(Project 4720-0340)