

[METRIC]
A-A-52430A
19 August 2013
SUPERSEDING
A-A-52430(AT)
15 February 1993

COMMERCIAL ITEM DESCRIPTION

PADS, CUSHIONING: PERSONNEL-PROTECTION,
VEHICULAR (METRIC)

Reinstated as of 21 October 2002.

The 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 general requirements for pads, cushioning: personnel-protection, vehicular (metric). Pads, cushioning: personnel-protection, vehicular (metric) covered by this CID are intended for commercial/industrial applications.
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).

<u>AA52430</u>	-	<u>001</u>
—		—
CID		Dash
number		number

3. SALIENT CHARACTERISTICS.

3.1 Interface and physical dimensions. Pads, cushioning: personnel-protection, vehicular (metric) supplied to this CID shall be as specified herein.

3.1.1 Materials. Materials shall be as specified in applicable drawings and shall meet the requirements specified herein. They shall be free of defects which adversely affect performance, serviceability, or durability of the finished product.

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 43218-3990, or email fluidflow@dla.mil. 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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3.1.2 Types and Classes. CID dash number shall be as specified in table I.

TABLE I. CID Dash number relationship to type and class.

CID dash number	Type information	Previous class code	Class information
001	Type I - Facial contact	CS	Closed cell, expanded rubber.
002	Type I - Facial contact	VS	Cellular vinyl elastomer.
003	Type I - Facial contact	WF	Foam rubber.
004	Type II - Head and body contact.	CS	Closed cell, expanded rubber.
005	Type II - Head and body contact	VS	Cellular vinyl elastomer.
006	Type II - Head and body contact	WF	Wool felt

3.1.3 Type I class CS pads. Base material shall be of closed-cell rubber conforming to grade 2A1 as specified in ASTM D1056.

3.1.4 Type I class VS pads. Base material shall be of cellular expanded polyvinyl chloride of density equivalent to grade 2A1 as specified in ASTM D1056.

3.1.5 Type I class FR pads. Base material shall be of foam rubber conforming to grade 1C1 as specified in ASTM D1056.

3.1.6 Type II class CS and VS pads. Base material shall be as specified in 3.1.3 and 3.1.4, respectively.

3.1.7 Type II class WF pads. Base material shall be a firm pad mechanical-roll wool felt. The wool felt shall be mildew and moisture resistant in accordance with accepted commercial treatment procedures.

3.2 Design and construction. The cushioning pad shall be an assembly consisting of cushioning material which shall meet the requirements specified herein and shall have a smooth, tough surface coating. Metal inserts, when specified, shall be zinc and dichromate plated mild steel or alodine clad aluminum and shall be securely attached as shown in applicable drawings (see 7.5). Pads shall be designed for application by cementing to painted or unpainted surfaces, or in the case of metal backed pads, by welding, riveting, or bolting as specified in applicable drawings.

3.2.1 Welding, riveting, or bolting. Pads intended to be bolted, riveted, or welded in place shall include provisions for such attachments as shown in applicable drawings (see 7.5). Welding tabs shall extend 3/4 inch beyond pads as shown in applicable drawings. Welding tabs shall not be plated.

3.2.2 Type I pads. When specified in applicable drawing (see 7.5), reinforcement shall be firmly bonded to metal insert with Polychloroprene rubber base oil resistant type general purpose adhesive. Reinforcement shall consist of woven nylon or Dacron cloth netting and shall be securely cemented, as specified, over back of backing plate for 13 millimeters (mm) and up the edge of the pad for 13 mm. In no case shall reinforcement come to full height of pad. Surface coating of Polychloroprene not less than 0.5 mm thick shall smoothly cover entire assembly, except attaching lugs, as shown in applicable drawing (see 7.5).

3.2.3 Type II pads. Construction shall be as specified in 3.2.2 except that plain or flat knit cotton surgical stockinet or nylon or Dacron cloth netting shall be securely cemented, as specified, over back or backing plate for 13 mm (classes CS and VS). Polychloroprene coating shall be not less than 0.8 mm thick.

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3.2.4 Alternate coating and reinforcement. Unless otherwise specified (see 7.5), coating shall be of sprayable, strippable vinyl material for external pads only. Coating shall be not less than 0.5 mm thick for type I pads and not less than 0.8 mm thick for type II pads. As an alternate reinforcement for type II, class CS and VS pads, pressure sensitive thermosetting adhesive type electrical insulation tape with cotton fabric backing shall be used. Surface coating as specified in 3.2.2 shall be applied.

3.2.5 Dimensions. Pad dimensions shall conform to applicable drawings (see 7.5). Except in restricted locations, minimal thickness of 19 mm shall be maintained.

3.3 Performance.

3.3.1 Bonding. Pads bonded to metal inserts shall withstand temperature range of minus 40 ± 2 degrees Celsius ($^{\circ}\text{C}$) to plus $70 \pm 1^{\circ}\text{C}$ without bonding separation, embrittlement, or cracking. Force required to separate plies or coatings shall be not less than 2.3 kg per 25.4 mm of width.

3.3.2 Softness. Pads shall conform to softness range specified in table II. Tests shall be made on finished pad at locations that assure uniformity near edges, as well as at any location of pad, provided periphery of indenter does not extend beyond apex of curvature at edges of pad surfaces.

TABLE II. Loads on 25.4 mm ball to cause indentation of 1/4 of pad thickness.

Type	Temperature ($^{\circ}\text{C}$)	Test weight (kg)
I Facial	+ 21 to + 24	2.3
II Body	+ 21 to + 24	4.5
I Facial	- 40 to - 43	13.6
II Body	- 40 to - 43	15.9

3.3.3 Resistance to extreme temperature. Pads shall evidence no cracks, delaminations, or adhesive failure after 72 hours exposure at 70°C and 72 hours at -40°C .

3.3.4 Fire resistance. Finished pads shall not flame or glow for more than 30 seconds after being subjected to a fire resistance test in accordance with method 5903 of FED-STD-191. Flame and glow time shall be combined to determine conformance to the requirement.

3.3.5 Water absorption. Complete pads shall show no water absorption exceeding 0.5 percent by weight of finished pad, excluding weight of metal parts. To determine water absorption, three finished pads shall be weighed and immersed in water at $24 \pm 3^{\circ}\text{C}$ with upper surface of each pad approximately 15 mm below surface of water. After 24 hours of immersion, each sample shall be removed, surface dried, and then reweighed. Percentage increase in weight shall be calculated to determine conformance to requirement.

3.3.6 Flexibility. Pads shall not become hard or inflexible due to absorption of sealer, adhesive, or coating and shall evidence no cracking or bond separation. To determine conformance to the requirement, a pad without metal backing shall be bent 60 degrees back and forth around a 25 mm mandrel, completing one cycle in 10 seconds.

3.4 Material safety data sheet (MSDS). If the procuring activity desires a MSDS shall be prepared in accordance with FED-STD-313 (see 7.5).

3.5 Color. Color of exterior surfaces of pads for use inside vehicle shall be black, and finish shall be acceptable from gloss to lusterless. Hatch opening pads and others exposed to exterior view shall be forest green.

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3.6 Marking. Pads, cushioning: personnel-protection, vehicular (metric) supplied to this CID shall be marked with the manufacturer's (MFR's) standard commercial PIN. (NOTE: The part number marked on the unit pack shall be the CID PIN.)

3.7 Recycled, recovered, or environmentally preferable materials. Recycled, recovered, or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the operational and maintenance requirements, and promotes economically advantageous life cycle costs.

3.8 Workmanship. Pads, cushioning: personnel-protection, vehicular (metric) shall be processed in such a manner as to be uniform in quality and shall be free from other defects that will affect life, serviceability, or appearance.

4. REGULATORY REQUIREMENTS. The offeror/contractor is encouraged to use recovered materials to the maximum extent practicable, in accordance with 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.

5.3 Certification. Certification must be done with the procuring activity approval. The contractor shall certify that the product offered meets the salient characteristics of the description and conforms to the producer's own drawings, specifications, standards, and quality assurance practices, and is the same as the product offered for sale in the commercial marketplace. The government reserves the right to require proof of such conformance prior to first delivery and thereafter as may be otherwise provided for under the provisions of the contract

6. PACKAGING. Preservation, packing, and marking shall be as specified in the contract or 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 Environmentally preferable material. Environmentally preferable materials should be used to the maximum extent possible to meet the requirements of this specification. As of the dating of this document, the U.S. Environmental Protection Agency (EPA) is focusing efforts on reducing 31 priority chemicals. The list of chemicals and additional information is available on their website <http://www.epa.gov/osw/hazard/wastemin/priority.htm>. Included in the EPA list of 31 priority chemicals are cadmium, lead, and mercury. Use of these materials should be minimized or eliminated unless needed to meet the requirements specified herein (see Section 3).

7.3 Commercial and Government Entity (CAGE) code. For ordering purposes, inventory control, and submission of these Pads, cushioning: personnel-protection, vehicular (metric) supplied to DLA Land and Maritime under the Military Parts Control Advisory Group (MPCAG) evaluation program, CAGE code 58536 should be used.

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7.4 Source of documents.

FEDERAL STANDARD

FED-STD-191 – Textile Test Methods

FED-STD-313 - Material Safety Data, Transportation Data, And Disposal Data For Hazardous Materials Furnished To Government Activities

(Copies of these documents are available online at <http://quicksearch.dla.mil> or from the DLA Document Services Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111–5094).

FEDERAL REGULATIONS

FAR – Federal Acquisition Regulations (FAR)

(Copies of these documents are available online at www.acquisition.gov/comp/far/index.html or from the U.S. Government Printing Office, 732 North Capital Street, NW, Washington D.C. 20401.)

Other Publications

ASTM INTERNATIONAL

ASTM D1056 - Standard Specification for Flexible Cellular Materials - Sponge or Expanded Rubber

(Copies of these documents are available online at <http://www.astm.org> or from the ASTM International, P.O. Box C700, 100 Barr Harbor Drive, West Conshohocken, PA 19428-2959.)

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

- a. CID document number, revision, and CID PIN.
- b. Product conformance provisions or certification.
- c. Packaging requirements.
- d. Any reports.

7.6 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.)

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<u>MFR's CAGE</u>	<u>MFR's name and address</u>
6K404	BASIC RUBBER AND PLASTICS CO. 8700 BOULDER CT WALLED LAKE, MI 48390-4104 Tel: (248) 360-7400 David Smith david@basicrubber.com Deb Isaacson deb@basicrubber.com
01685	AEROFAB COMPANY INC. 2335 GOODRICH ST FERNDALE, MI 48220-1440 (248) 542-0051 PAMELA HAMILTON info@aerofabcompany.com JULES BOLS III aerofab03@comcast.net
4GU32	EVERLAST SEALS AND SUPPLY LLC 41 MONTROSE AVE BROOKLYN, NY 11206-1959 (718) 388-7373 JOHN MARTINI John@everlastseals.com JACOB FELSENBURG jacob@everlastseals.com

7.7 Government users. To acquire information on obtaining these pads, cushioning: personnel-protection, vehicular (metric) from the Government inventory system, contact DLA Land and Maritime, ATTN DLA Land and Maritime Call Center (-NAB), P.O. Box 3990, Columbus, OH 43218-3990 or telephone (614) 692-2271 or (614) 692-3191.").

7.8 Legacy. This commercial item description is a replacement for MIL-P-14401 for all federal agencies (MIL-P-14401 is canceled as of 15 February 1993 and copies of these documents are available online at <http://quicksearch.dla.mil> or from the DLA Document Services Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094).

7.9 Changes from previous issue. Marginal notations are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

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MILITARY INTERESTS

Custodians:

Army - AT

DLA - CC

Review activity:

Army-AR

CIVIL AGENCY COORDINATING ACTIVITY:

GSA - FSS

Preparing activity:

DLA - CC

Project 2590-2012-002

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>.