INCH-POUND

MIL-DTL-32240
1 March 2007

DETAIL SPECIFICATION

SUBMARINE WETBAG

This specification is approved for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers the requirements for the Submarine Wetbag for use with Trash Disposal Units installed aboard U.S. Navy submarines.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this specification are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements of documents cited in sections 3, 4, or 5 of this specification, whether or not they are listed.

2.2 Government documents.

2.2.1 Specifications, standards, and handbooks. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

COMMERCIAL ITEM DESCRIPTION

A-A-52094	-	Thread, Cotton

(Copies of this document are available online at http://assist.daps.dla.mil/quicksearch/ or http://assist.daps.dla.mil or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

U.S. Army Natick Soldier Center

2-3-0585	-	Submarine Wetbag
2-3-0586	-	Pattern, Submarine Wetbag

(Copies of these documents are available from Commander, U.S. Army Soldier Systems Center, Kansas Street, Natick, MA 01760 or online at http://www.natick.army.mil/.)

Comments, suggestions, or questions on this document should be addressed to: Commander, Naval Sea Systems Command, ATTN: SEA 05Q, 1333 Isaac Hull Avenue, SE, Stop 5160, Washington Navy Yard DC 20376-5160 or emailed to commandstandards@navy.mil, with the subject line "Document Comment". Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at http://assist.daps.dla.mil.

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2.3 Non-Government publications. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC 135	-	Dimensional Changes of Fabrics after Home Laundering

(Copies of this document are available from AATCC, PO Box 12215, Research Triangle Park, NC 27709 or online at www.aatcc.org.)

AMERICAN NATIONAL STANDARDS INSTITUTE (ANSI)

ANSI/ASQ Z1.4	-	Sampling Procedures and Tables for Inspection by Attributes

(Copies of this document are available from the American National Standards Institute, 25 W. 43rd St, 4th Floor, New York, NY 10036 or online at http://webstore.ansi.org/.)

ASTM INTERNATIONAL

ASTM D737	-	Test Method for Air Permeability of Textile Fabrics (DoD adopted)
ASTM D1424	-	Standard Test Method for Tearing Strength of Fabrics by Falling-Pendulum Type (Elmendorf) Apparatus (DoD adopted)
ASTM D1683	-	Standard Test Method for Failure in Sewn Seams of Woven Apparel Fabrics (DoD adopted)
ASTM D3775	-	Standard Test Method for Fabric Count of Woven Fabric (DoD adopted)
ASTM D3776	-	Standard Test Methods for Mass Per Unit Area (Weight) of Fabric (DoD adopted)
ASTM D5034	-	Standard Test Method for Breaking Strength and Elongation of Textile Fabrics (Grab Test) (DoD adopted)
ASTM D6193	-	Standard Practice for Stitches and Seams (DoD adopted)

(Copies of these documents are available from ASTM International, 100 Barr Harbor Dr., PO Box C700, West Conshohocken, PA 19428-2959 or online at www.astm.org.)

2.4 Order of precedence. In the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence. Nothing in this document, however, supersedes applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 First article. When specified (see 6.2), a sample shall be subjected to first article inspection in accordance with 4.2.

3.2 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.

3.3 Materials and components. The bag and associated drawstring shall have no plastic or metal materials in its construction. The bags shall be made of biodegradable cotton woven cloth, and biodegradable cotton thread and cord.

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3.3.1 Fabric. The cloth shall be made from 100 percent cotton that is natural, unbleached, uniform natural color, and woven using single yarn for both the warp (see 6.4.5) and filling. The cloth shall conform to the physical requirements listed in Table I.

TABLE I. Physical requirements.

Physical Requirements	Limits
Fabric Count, yards per inch (YPI)	
Warp	70 (min)
Filling	42 (min)
Weight, oz./sq. yd.	8.5 – 9.0
Breaking Strength, lbs.	
Warp	120 (min)
Filling	130 (min)
Tearing Strength, lbs.	
Warp	6.5 (min)
Filling	8.0 (min)
Air Permeability, CFM	50 (max)

3.3.2 Dimensional stability. The fabric shall not stretch excessively when wet, so that the finished bag shall be capable of passing through the TDU when the bag is filled with trash. The fabric shall have an average dimensional change in the warp of no more than 15.0 percent, and not more than 5.0 percent in the fill (see 6.4.1) direction.

3.3.3 Thread. The thread shall be cotton conforming to A-A-52094, Type I, machine thread, soft finish, size ticket no. 30 (60 tex) / 3-ply with a minimum breaking strength of 3.0 pounds.

3.3.4 Cotton drawstring cord. The drawstring cord shall be cotton braid, $^{3}/_{16}$-inch diameter, 8 carriers with 3 double, 2-ply yarns/carrier (6 2-ply yarns/carrier), and shall have a minimum breaking strength of 105.0 pounds.

3.4 Physical properties of bag. The bag shall be constructed of one piece of cloth. The dimensions of the cut pieces and finished bag shall be as specified on Drawing 2-3-0586. The bag opening shall form a cuff over the open end of the pre-pack can and the bottom of the bag shall extend and fully contact the bottom of the pre-pack can simultaneously.

3.5 Opening of bag. The opening of the bag shall have a tunnel with a cotton, closed loop drawstring to close the bag. The drawstring shall be as specified in 3.3.4 and shall be attached to the bag so it may be used to close and lift the bag without tearing.

3.6 Bag density. The filled bags shall be designed to be denser than seawater when filled to their maximum volume and weighted to no more than 40.0 pounds.

3.7 Workmanship. The bags shall be uniformly made; neatly trimmed; and free from holes, stains, tears, or other defects which may impair their serviceability or appearance. Bags shall be free from excessive lint.

3.8 Seams. The bag shall be inverted so that the seams are located on the inside of the bag. All stitch lines shall be backstitched as specified on Drawing 2-3-0585. Seams shall be straight and even, and shall be secured at the ends to prevent unraveling.

3.8.1 Side seam. The single seam of the bag shall conform to ASTM D6193, seam type SSa-2 with 301 or 401 stitch type at 7-9 stitches per inch (SPI).

3.8.2 Seam strength. The seams strength shall be 70.0 pounds or greater when tested in accordance with ASTM D1683 and ASTM D5034.

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