INCH POUNDS

CO-PD-02-05D
13 May 2015
SUPERSEDING
CO-PD-02-05C
23 October 2014

PURCHASE DESCRIPTION
IMPROVED MOLLE MEDIC SYSTEM

This purchase description document is approved for use by all Departments and Agencies of the Department of Defense (DoD).

1. SCOPE.

1.1 Scope. This document covers a bag used to carry medical supplies by a combat medic or corpsman in the armed forces.

1.2 Classification. The Improved MOLLE Medic System (IMMS) will be of the following classes:

1.2.1 Classes.

Class 1 - Woodland Camouflage
Class 2 - 3 color Desert Camouflage
Class 3 - Arctic White
Class 4 - Marine Pattern (MARPAT) Woodland
Class 5 - Marine Pattern (MARPAT) Desert
Class 6 - Universal Camouflage Pattern (UCP)
Class 7 - Operation Enduring Freedom Camouflage Pattern (OEF-CP)
Class 8 - Operational Camouflage Pattern (OCP)

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section 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.

Comments, suggestions, or questions on this document should be addressed to: Department of the Army, Natick Soldier Research, Development and Engineering Center, 15 Kansas St., Natick MA. ATTN: RDNS-SEW-EWC.

AMSC N/A FSC 8465

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 DESCRIPTIONS

A-A-55126 - Fastener, Tapes, Hook and Loop, Synthetic
A-A-55301 - Webbing, Textile, Textured or Multifilament Nylon
A-A-55634 - Zippers (Fasteners, Slide Interlocking
A-A-59826 - Thread Nylon

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-B-371 - Braid, Textile, Tubular
MIL-C-5040 - Cord Fibrous, Nylon
MIL-C-8061 - Cloth, Nylon, Raschel Knit
MIL-DTL-10884 - Fasteners, Snap
MIL-DTL-32439 - Cloth, Duck, Textured Nylon
MIL-PRF-5038 - Tape Textile and Webbing, Textile, Reinforcing, Nylon
MIL-W-5664 - Webbing, Textile, Elastic
MIL-W-17337 - Webbing, Textile, Woven Nylon

(Copies of these documents are available online at https://assist/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 are those cited in the solicitation or contract.

DRAWINGS

U.S. ARMY NATICK SOLDIER RESEARCH, DEVELOPMENT AND ENGINEERING CENTER

2-4-0101 - FASTENER, 1-INCH
2-6-0798 - QUICK ATTACH BUCKLE, 1-INCH
2-6-0984 - IMPROVED MOLLE MEDICAL SYSTEM ASSEMBLY
2-6-101 - LADDERLOCK, 1-INCH
2-6-102 - SLIDE, 1-INCH
2-6-1006 - 1-1/2 INCH SIDE RELEASE BUCKLE
2-6-1014 - BARREL LOCK W/KEEPER
2-6-1016 - SLIDE, 1-1/2 INCH
4-1-176 - SNAP FASTENER

4-1-178 - SNAP FASTENER

(Copies of specifications, standards and drawings required by contractors in connection with specification procurement functions should be obtained from the procuring activity or as directed by the Contracting Officer.

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.

AEROSPACE INDUSTRIES ASSOCIATION OF AMERICA INC.

AIA/NAS NASM 20652/1B - Eyelets, Metallic, and Eyelet Washers, Metallic

(Copies are available online at http://www/aia-aerospace.org or from the Aerospace Industries Association of America Inc, 1000 Wilson Boulevard, Suite 1700, Arlington, VA 22209-3928 or from the IHS Standards Store at http://aero-defense.ihs,com/documents.)

AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS (AATCC)

AATCC Method 8 - Colorfastness to Crocking: AATCC Crockmeter Method
AATCC Method 16.2 - Colorfastness to Light: Carbon Arc
AATCC Method 16.3 - Colorfastness to Light: Xenon
AATCC Method 61 - Colorfastness to Laundering: Accelerated
AATCC Evaluation Procedure 1 - Gray Scale for Color Change
AATCC Evaluation Procedure 2 - Gray Scale for Staining
AATCC Evaluation Procedure 8 - Chromatic Transference Scale, 9-Step
AATCC Evaluation Procedure 9 - Visual Assessment of Color Difference of Textiles

(Copies of are available online at http://www.aatcc.org or from the American Association of Textile Chemists and Colorists, P.O. Box 12215, Research Triangle Park, NC 27709-2215.)

AMERICAN SOCIETY FOR QUALITY (ASQ)

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

(Copies are available online at http://www.asq.org or from the American Society for Quality, 600 North Plankinton Avenue, Milwaukee, WI 53203.)

ASTM INTERNATIONAL

ASTM D276	Standard Test Methods for Identification of Fibers in Textiles
ASTM D523	Specular Test Method for Specular Gloss
ASTM D922	Standard Specification for Nonrigid Vinyl Chloride Polymer Tubing
ASTM D1053	Standard test methods for Rubber Property-Stiffening at Low Temperatures, Flexible Polymers and Coated fabrics

ASTM D2061	Standard Test Methods for Strength Tests for Zippers
ASTM D6576	Standard Specification for Flexible Cellular Rubber Chemically Blown
ASTM D6988	Standard Guide for Determination of Thickness of Plastic Film Test Specimens

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

2.4 Order of precedence. Unless otherwise noted herein or in the contract, in the event of a conflict between the text of this document and the references cited herein, the text of this document takes precedence.

3. REQUIREMENTS

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

3.2 Materials and components. The contractor shall select materials and components that meet all applicable requirements specified herein and as specified in drawing 2-6-0984. Recycled recovered or environmentally preferable materials should be used to the maximum extent possible provided that the material meets or exceeds the requirements of this document and promotes economically advantageous life cycle costs.

3.2.1 Cloth.

3.2.1.1 Base fabric. The base fabric used for the bag shall be a textured nylon duck, coated on the back side with clear polyurethane and water repellent treated conforming to MIL-DTL-32439, Type I, Class 3, Styles A, B, C, D, E, F, G or H as specified (see 6.2).

NOTE: The following paragraphs have been deleted, 3.2.1.2, 3.2.1.3, 3.2.1.4, 3.2.1.5, 3.2.1.6, 3.2.1.7, 3.2.1.7.1, 3.2.1.8, 3.2.1.9, 3.2.1.10, 3.2.1.11, 3.2.1.12 and 3.2.1.12.1.

3.2.1.13 Cloth, nylon, raschel knit. The mesh cloth shall be nylon, raschel knit conforming to MIL-C-8061, Type II. The color of the cloth shall be Camouflage Green (CG) 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6 and Tan 499 for Class 7 and Class 8 unless otherwise specified in the contract.

3.2.1.13.1 Color matching. The finished cloth shall match the standard sample when evaluated as specified in 4.4.2.

3.2.1.13.2 Colorfastness. The dyed and finished nylon, raschel knit cloth and specified webbings shall meet the colorfastness requirements of Table I when evaluated as specified in Table IV.

TABLE I. Colorfastness requirements mesh fabric (see 3.2.1.13), webbings (see 3.2.2.1, 3.2.2.3, 3.2.2.4, 3.2.2.5 and 3.2.2.6), fastener tape - hook and loop (see 3.2.3.3).

Colorfastness	Laundering Color Change and Staining (3 cycles) (min.)	Light (40 hrs or 170 kJ) (min.)	Crocking (wet and dry) (min.)
CG 483, Tan 380, Arctic White 488, Coyote 498, Foliage Green 504 and Tan 499	3-4	3-4	3.5

3.2.2 Webbing.

3.2.2.1 Webbing (1-inch). The webbing shall be 1-inch wide conforming to A-A-55301, Type III, made from textured yarn. The color of the webbing shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6 and Tan 499 for Class 7 and Class 8 unless otherwise specified in the contract. The webbing shall meet the colorfastness requirements of Table I when evaluated as specified in Table IV.

3.2.2.2 Spectral reflectance (Classes 1, 4, 5, 6, 7 and 8). The 1-inch, 2-inch, and 1-1/2 inch wide webbings for Classes 1, 4, 5, 6, 7, and 8, shall meet the spectral reflectance requirements listed in Table II when evaluated as specified in 4.4.1 unless otherwise specified in the contract.

TABLE II. Spectral reflectance requirements (percent) for webbings (Classes 1, 4, 5, 6, 7 & 8 – (1-inch, 2-inch & 1-1/2 inch widths).

Wavelength (nanometers)	Class 1 Camouflage Green 483		Class 4 and 5 Coyote 498		Class 6 Foliage Green 504		Class 7 and Class 8 Tan 499	
	Min	Max	Min	Max	Min	Max	Min	Max
600	3	10	8	20	8	26	8	26
620	3	10	8	20	8	26	8	26
640	3	10	8	22	8	28	8	30
660	3	11	8	24	10	30	8	34
680	3	13	12	24	10	34	12	38
700	4	28	12	34	12	38	12	40
720	5	40	16	42	16	42	16	46
740	7	52	22	46	16	46	22	50
760	11	60	30	50	18	48	30	50
780	17	64	34	54	18	48	34	54
800	24	67	36	56	20	50	36	56
820	32	70	38	58	22	54	38	58
840	37	71	38	58	24	54	38	58
860	40	73	40	60	26	56	40	60

3.2.2.3 Webbing (2-inch). The 2-inch webbing shall be nylon conforming to MIL-W-17337 Class 2. The color of the webbing shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8, unless otherwise specified in the contract. The dyed webbing shall meet the colorfastness in Table I when tested as specified in Table IV. The dyed webbing shall match the standard sample when evaluated as specified in 4.4.2. Spectral reflectance requirements shall be in accordance with Table II for Classes 1, 4, 5, 6, 7, and Class 8, when evaluated as specified in 4.4.1, unless otherwise specified in the contract.

3.2.2.4 Webbing, elastic (1-inch). The 1-inch elastic webbing shall be cotton elastic conforming to MIL-W-5664, Type I, Class 1. The color of the elastic webbing shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8, unless otherwise specified in the contract. The elastic webbing shall meet the colorfastness in Table I when evaluated as specified in Table IV. The elastic webbing shall match the standard sample when evaluated as specified in 4.4.2.

3.2.2.5 Webbing, elastic (1/2-inch). The 1/2-inch elastic webbing shall be cotton elastic conforming to MIL-W-5664, Type I, Class 1. The color of the webbing shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6 and Tan 499 for Class 7 and Class 8, unless otherwise specified in the contract. The elastic webbing shall meet the colorfastness in Table I when evaluated as specified in Table IV. The elastic webbing shall match the standard sample when evaluated as specified in 4.4.2.

3.2.2.6 Webbing, (1-1/2 inch). The 1-1/2 inch webbing shall be nylon conforming to MIL-W-17337 Class 2 The color of the webbing shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6 and Tan 499 for Class 7 and Class 8, unless otherwise specified in the contract. The dyed webbing shall meet the colorfastness in Table I when evaluated as specified in Table IV. The dyed webbing shall match the standard sample when tested as specified in 4.4.2. Spectral reflectance requirements shall be in accordance with Table II for Class 1, 4, 5, 6, 7 and Class 8, when evaluated as specified in 4.4.1, unless otherwise specified in the contract.

3.2.3 Tape.

3.2.3.1 Tape, reinforcing, binding, (1-inch). The reinforcing tape used for binding shall be plain weave, nylon, 1-inch wide conforming to MIL-PRF-5038, Type III. The color of the tape shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6 and Tan 499 for Class 7 and Class 8, unless otherwise specified in the contract. The dyed tape shall match the standard sample when tested as specified in 4.4.2. The dyed tape shall meet the colorfastness requirements of Table III when evaluated as specified in Table IV.

TABLE III. Colorfastness requirements for tapes (see 3.2.3.1, 3.2.3.2) & braid (see 3.2.4)

Colorfastness	Laundering Color Change and Staining (3 cycles) (min.)	Light (20 hrs or 85 kJ) (min.)
CG 483, Tan 380, Arctic White 488, Coyote 498, Foliage Green 504 and Tan 499 & Black Braid (see 3.2.4)	4	4

3.2.3.2 Tape, reinforcing, (9/16-inch). The reinforcing tape shall be herringbone twill weave, nylon, 9/16-inch wide conforming to MIL-PRF-5038, Type V. The color of the tape shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8. The dyed tape shall match the standard sample when tested as specified in 4.4.2. The dyed tape shall meet the colorfastness requirements of Table III when evaluated as specified in Table IV.

3.2.3.3 Fastener tapes, hook and loop. The fastener tapes, hook and loop shall be nylon conforming to Type II, Class 1 of A-A-55126. The color of the hook and loop fastener tape shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8. The fastener tapes, hook and loop shall meet the colorfastness requirements of Table I with the exception of lightfastness when evaluated as specified in Table IV.

3.2.3.4 One Wrap® fastener tape - hook and loop (1-inch). The fastener hook and loop tape shall be 1-inch wide and conform to Velcro, One Wrap®, HTH 888, part no 121358 or equal (see 6.4). The color of the hook and loop fastener tape shall be Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8, when evaluated as specified in Table IV.

3.2.4 Braid, tubular, (11/32-inch). The 11/32-inch flat braid, used for the slide fastener pull thongs, shall be either cotton or polypropylene conforming to MIL-B-371, Type VII, Class 2. The color of the braid shall be black. The dyed braid shall match the standard sample and when tested as specified in 4.4.2. The dyed braid shall meet the colorfastness requirements of Table III when evaluated as specified in Table IV.

3.2.5 Thread.

3.2.5.1 Thread. The thread used for all stitching except bartacks, and binding tape shall conform to A-A 59826, Thread, Nylon Type I or II, Class B, Tex no. 90-101, 3 or 4 ply (Government size F). The color of the thread shall be a good match to Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8 when evaluated as specified in 4.4.2.

3.2.5.2 Thread, bartacks, and binding tape. The thread used for bartacks and binding tape shall be A-A 59826, Thread, Nylon, Type I or II, Class B, Tex no. 68-70, 3 ply (Government size E). The color of the thread shall be a good match to Camouflage Green 483 for Class 1, Tan 380 for

Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8 when evaluated as specified in 4.4.2.

3.2.6 Cord, round. The round cord shall conform to MIL-C-5040 Type II. The color of the cord shall match Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8 when evaluated as specified in 4.4.2.

3.2.7 Slide fasteners. The slide fasteners shall be as specified in 3.2.7.1 and 3.2.7.2.

3.2.7.1 Slide fastener (main opening). The slide fastener shall be individual element plastic chain conforming to Type I, Style 18 of A-A-55634. The fastener size shall be number 10, plastic, Class I (normal duty), or as an alternate, number 9, plastic, Class II (heavy duty). The fastener shall be non-reversible, non-separating without lock, such that the fastener opens between the sliders. Two (2) sliders in throat to throat configuration, with long tab pulls (1-1/2 inches in length) having holes large enough to allow an 11/32-inch wide thong (see 3.2.4), and a 1/4-inch diameter padlock to lock the slider pulls together, shall be used. The tape used for the slide fastener shall be water repellent treated. All slide fastener components, including the tape, shall be Black.

3.2.7.2 Slide fasteners (outer pockets). Slide fasteners shall be the same as those specified in 3.2.7.1 except that fastener size 9, plastic, Class I (normal duty), with a minimum crosswise breaking strength of chain of 145 pounds is also acceptable when tested as specified in Table IV, and the long tab pulls shall be 1-1/4 inches in length.

3.2.8 Plastic stiffeners. The stiffeners shall be made from high density, natural color polyethylene. The stiffener used on the inside back of the bag shall be .050 inch thick. The stiffeners used inside the 1-inch webbing attaching straps shall be .030 inch thick. Testing shall be as specified in Table IV.

3.2.9 Foam padding (1/4-inch and 1/2-inch). The 1/4-inch and 1/2-inch foam padding used in the bag shall conform to ASTM D6576.

3.2.10 Plastic Film (large inside pocket). The plastic film for the inside pocket shall be clear with U.V. protection, 15 millimeters thick, conforming to JPS Elastomerics No. ST-1522CL-85 or equal.

3.2.11 Buckles.

3.2.11.1 Buckle, side release (1-inch). The 1-inch side release buckle shall be in accordance with drawing 2-4-0101.

3.2.11.2 Buckle, quick release. The quick release buckle shall conform to Down East Inc. Part No.1584 or equal.

3.2.11.3 Buckle, slide (1-inch). The 1-inch slide buckle shall conform to drawing 2-6-102.

3.2.11.4 Buckles, ladderlock (1-inch). The 1-inch ladderlock buckle shall conform to drawing 2-6-101 where applicable.

3.2.11.5 Quick attach surface mount (female). The quick attach surface mount (female) shall be in accordance with drawing 2-6-0798.

3.2.11.6 Tri-glide slide (1-1/2 inch). The 1-1/2 inch tri-glide slide shall be in accordance with drawing 2-6-1016.

3.2.11.7 Buckle, side release (1-1/2 inch). The 1-1/2 inch side release buckle shall be in accordance with drawing 2-6-1006.

3.2.11.8 Barrel lock, single cord. All Barrel locks shall conform to drawing 2-6-1014.

3.2.12 Brass loop (1-inch). The 1-inch brass loop shall conform to ITW Waterbury Buckle Part No.01004-20 (welded) or equal.

3.2.13 Snap fasteners. The snap fasteners shall conform to MIL-DTL-10884 Style 2. The snaps shall be constructed in accordance with drawings 4-1-176, or 4-1-178. The snap fasteners shall have a dull black chemical finish except the button cap shells shall be a painted good match to Camouflage Green 483 for Class 1, Tan 380 for Class 2, Arctic White 488 for Class 3, Coyote 498 for Classes 4 and 5, Foliage Green 504 for Class 6, and Tan 499 for Class 7 and Class 8. The enamel shall be uniformly coated over the top surface of the shell including the visible portion of the edge. The gloss value for the black chemical finish shall be rated not more than 40. The enamel shall capable of withstanding attachment operations without removal of any enamel. The enamel coating shall be smooth and free of sags, runs and streaks. Testing shall be as specified in Table IV.

3.2.14 Eyelet. The eyelet for the drain holes shall be brass in accordance with NASM 20652/1B, Dash No. ABE 131 with a painted finish in the color as specified in the contract.

3.2.15 D-ring metal. The D-ring shall be ITW Waterbury part number 01047-20 or equal, brass or steel welded with a painted finish in the color as specified in the contract.

3.2.16 Pull tab tubing. The pull tab tubing shall be vinyl, matte finish; the outer diameter shall be 0.375 (±0.010) inches and the inner diameter 0.25 (+.005/-.010) inches. The wall shall be 0.0625 (±0.008) inches thick, and the hardness shall be 70 durometer. The color shall be Tan 499 for Class 1, 2, 4, 5, 7, and Class 8, White for Class 3 and Foliage Green 504 for Class 6, unless otherwise specified in the contract. Testing shall be as specified in Table IV.

3.2.17 Slide (2-inch). The 2-inch slide shall be brass, ITW Waterbury, buckle 00022-22 or equal with a painted finish in the color as specified in the contract.

3.3 Construction.

3.3.1 Stitching. Stitching requirements shall be in accordance with the applicable drawings.

Thread tensions shall be maintained so that there will be no loose stitching resulting in loose bobbin or top thread or excessively tight stitching resulting in puckering of the materials sewn. The lock shall be embedded in the materials sewn. All stitching shall be back-tacked with a minimum of five (5) stitches to prevent raveling. Automatic stitching machines may be used to perform any of the stitch patterns, provided the requirements for stitch pattern, stitches per inch, and size and type of thread are met, and at least three (3) tying, overlapping, or back stitches are used to secure the ends of stitching.

3.3.2 Setting of eyelets. Holes shall be prepunched to receive the eyelets. The prepunched holes shall be smaller than the outside diameter of the eyelet barrel so that the barrel must be forced through the hole. The eyelets shall be securely clinched in a manner that will prevent detachment from, or cutting of, the surrounding material. The eyelets shall be clinched without splitting (see Table V). The clinched portion of the eyelet shall be on the inside of the assembly.

3.3.3 Setting of snap fasteners. A hole shall be prepunched to receive the button and eyelet components of the snap fasteners. The hole shall be smaller than the outside diameter of the button and eyelet barrels so that the barrel must be forced through the hole. The hole shall not be punched in the setting operation with the button or eyelet barrel. The fasteners shall be securely clinched without cutting the adjacent materials and no more than three (3) splits may occur in the button or eyelet barrel (see Table V).

3.3.4 Fusing ends of nylon webbing. All ends of nylon webbing shall be fused. The apparatus used to fuse the webbing ends shall be capable of providing sufficient heat to provide a smooth edge with the cut ends of the webbing yarns all fused together (see Table V).

3.4 Design. Deleted.

3.5 Interface. The IMMS is a component of the Modular Lightweight Load-carrying Equipment (MOLLE) system.

3.6 Performance.

3.6.1 Function. The IMMS is used for carrying medical supplies of a combat medic or corpsman.

3.6.2 and 3.6.3 Deleted.

3.7 Marking. Each IMMS shall have the letters “US” printed in black ink that will not fade to the point of being illegible after repeated washings and field use. The size and location of the “US” marking shall be as indicated on the applicable drawing. Each IMMS shall have combination identification and washing instructions label. The labels shall be of sufficient strength and legibility to withstand repeated washings and field use. The color of the label shall be Camouflage green and the marking medium shall be Black. The printing shall be legible and shall not show offsetting, smearing or bleeding. Size of characters shall be approximately 1/8-inch for capitals and 3/32-inch for lower case. The identification portion shall contain the item description, National Stock Number (NSN), contract number, lot number, and contractor’s name. The

combination label shall be located and sewn as indicated on the applicable drawing. The washing instructions portion of the label shall be as follows:

HAND WASHING

1. Scrape dirt/dust from the item using a brush that will not damage the fabric.
2. Hose or wash item in a pail of water using a MILD detergent or synthetic soap.
3. Rinse thoroughly with clean water.
4. DO NOT USE CHLORINE BLEACH, COLORED SYNTHETIC SOAP, CLEANING FLUIDS OR SOLVENTS. They will discolor/deteriorate the item.
5. Dry item in shade or indoors.
6. DO NOT DRY IN DIRECT SUNLIGHT, DIRECT HEAT OR ON OPEN FLAME.
7. DO NOT LAUNDER OR DRY ITEM IN COMMERCIAL OR HOME TYPE LAUNDRY EQUIPMENT.
8. DO NOT REPAIR OR ATTEMPT TO DYE ITEM. TURN IN FOR REPAIR OR REPLACEMENT.

4. VERIFICATION

4.1 Classification of inspections. The inspection requirements specified herein are as follows:

a) First article inspection (see 4.2)
b) Conformance inspection (see 4.3)

4.2 First article inspection. When a first article is required (see 3.1and 6.2), it shall be examined for the defects specified in 4.3.2 ,4.3.3, Table V and Table VI. The presence of any defect shall be cause for rejection of the first article.

4.3.1 Conformance inspection. Conformance inspection shall be in accordance with 4.3.1, 4.3.2 and 4.3.3.

4.3.1.1 Sampling Inspection. Unless otherwise specified, sampling for inspection shall be performed in accordance with ANSI/ASQ Z1.4.

4.3.1.2 Component and material tests. Components and materials shall be tested for the characteristics listed in Table IV.

TABLE IV - Component and material testing

Characteristic	Requirement paragraph	Test method
Cloth, nylon, raschel knit		
Colorfastness to:		
Laundering (3 cycles)	3.2.1.13.2 and Table I	AATCC-61 (Test 1A) 1/
Light (40 hrs or 170 kJ)	3.2.1.13.2 and Table I	AATCC-16.2 or 16.3 2/
Crocking (wet and dry)	3.2.1.13.2 and Table I	AATCC-8 3/
Webbings, 1-inch, 2-inch & 1-1/2 inch		
Spectral reflectance	3.2.2.1, 3.2.2.3 & 3.2.2.6 and Table II	4.4.1
Colorfastness to:		
Laundering (3 cycles)	3.2.1.13.2 and Table I	AATCC-61 (Test 1A) 1/
Light (40 hrs or 170 kJ)	3.2.1.13.2 and Table I	AATCC-16.2 or 16.3 2/
Crocking (wet and dry)	3.2.1.13.2 and Table I	AATCC-8 3/
Webbings, elastic 1-inch & 1/2-inch		
Colorfastness to:		
Laundering (3 cycles)	3.2.2.4 & 3.2.2.5 and Table I	AATCC-61 (Test 1A) 1/
Light (40 hrs or 170 kJ)	3.2.2.4 & 3.2.2.5 and Table I	AATCC-16.2 or 16.3 2/
Crocking (wet and dry)	3.2.2.4 & 3.2.2.5 and Table I	AATCC-8 3/
Tape, reinforcing		
Colorfastness to:		
Laundering (3 cycles)	3.2.3.1 & 3.2.3.2 and Table III	AATCC-61 (4A) 1/, 4/
Light (20 hrs or 85 kJ)	3.2.3.1 & 3.2.3.2 and Table III	AATCC-16.2 or 16.3 2/
Fastener Tape, hook and loop		
Colorfastness to:		
Laundering (3 cycles)	3.2.3.3 and Table I	AATCC-61 (Test 1A) 1/
Crocking (wet and dry)	3.2.3.3 and Table I	AATCC-8 3/
Braid, tubular		
Colorfastness to:		
Laundering (3 cycles)	3.2.4 and Table III	AATCC-61 (Test 1A) 1/
Light(20 hrs or 85 kJ)	3.2.4 and Table III	AATCC-16.2 or 16.3 2/
Slide Fasteners		
Breaking Strength	3.2.7.2	ASTM D2061
Plastic stiffeners		
Material identification	3.2.8	ASTM D276
Thickness	3.2.8	ASTM D6988
Plastic Film		
Appearance	3.2.10	Visual
Thickness	3.2.10	ASTM D6988
Snap Fasteners		
Gloss	3.2.13	ASTM D523
Pull tab tubing		
Material Identification	3.2.16	ASTM D276
Finish and appearance	3.2.16	Visual

TABLE IV - Component and material testing - Continued

Characteristic	Requirement paragraph	Test method
Outer diameter	3.2.16	ASTM D922
Inner Diameter	3.2.16	ASTM D922
Wall Thickness	3.2.16	ASTM D922
Rubber stiffness	3.2.16	ASTM D1053

1/ Rated using the AATCC Evaluation Procedure 1, Gray Scale for Color Change and AATCC Evaluation Procedure 2, Gray Scale for Staining.
2/ Rated using the AATCC Evaluation Procedure 1, Gray Scale for Color Change
3/ Rated using the AATCC Evaluation Procedure 8, AATCC 9-Step Chromatic Transference Scale
4/ Only the stain on the nylon fibers of the color transfer cloth shall be evaluated.

4.3.2 Visual examination. Each component shall be examined for the defects listed below. The size shall be expressed in units of either IMMS or the individual component (when component is purchased separately). The sample unit shall be one (1) completely fabricated IMMS or individual component (when purchased separately) unless otherwise specified.

TABLE V. Defect examination

Examine	Defect	Classification	
		Major	Minor
Fabric	Hole, cut, tear, smash, broken or missing yarn, or open place clearly visible at normal inspection distance (approximately 3-feet).	101	
	Shade bar or abrasion mark.		201
	Defective or partially omitted coating		202
Webbing or tape	Any hole, cut, tears, or smash.	102	
	Not firmly and tightly woven, edges frayed or scalloped.	103	
	Multiple floats.		203
	Abrasion mark, slub, or broken end or pick.	104	
	Cut ends of webbing not fused as specified.	105	
Fastener tape	Any holes, cut, or tear.	106	
	Hooks flattened, broken, or missing. impairing function.	107	
Hardware	Broken or malformed, failing to serve intended purpose, corroded area, burr or sharp edge.	108	
	Finish omitted or not as specified:		
	- on brass or aluminum components		204
	- on steel components.	109	
	Area of partial or no finish.		205
	Any required component improperly installed causing failure to serve intended purpose.	110	
	Not assembled as specified.	111	
	Size or type not as specified	112	

TABLE V. Defect examination - Continued

Examine	Defect	Classification	
		Major	Minor
Snap fasteners	Any fastener not functioning properly i.e. fails to snap closed, provide a secure closure or to open freely.	113	
	NOTE: The fasteners shall be snapped and un-snapped twice to determine whether parts of fastener separate freely; and also affect a secure closure.		
	Clinched excessively tight, cutting adjacent material.	114	
	Clinched loosely, permitting any component to rotate freely but not to the degree that any component can be expected to become detached during use.	115	
	Clinched loosely to the degree that components can be expected to become detached during use.	116	
	NOTE: Incomplete roll of end of button or eyelet barrel is evidence of improper and insecure clinching.		
	Incorrect style.	117	
	Any splits in eyelet or button barrels.	118	
Sub-assemblies	Not attached as specified.		206
Eyelets	Clinched excessively tight, cutting adjacent material.	119	
	Insecurely clinched to a degree that eyelet may be detached from material.	120	
	Washer installed on incorrect side of material.		207
	Eyelet barrel split.		208
Slide fastener	Not functioning properly, failing to effect a secure closure or to open freely.		
	Not specified type or size.	121	
	Slider jams or fails to interlock.	122	
	Thong omitted.	123	
	Fastener tape cut or torn.	124	
SEAMS AND STITCHING:			
Open seam	1/2-inch or less.		209
	More than 1/2-inch.	125	
	NOTE: A seam shall be classified as open when one (1) or more stitches joining a seam are broken or when two (2) or more consecutive skipped or run-off stitches occur. On double stitched seams, a seam shall be considered open when either one (1) or both sides of the seam are open.		

TABLE V. Defect examination - Continued

Examine	Defect	Classification	
		Major	Minor
SEAMS AND STITCHING - CONTINUED:			
Raw edge (on edge required to be finished)	More than 1/2-inch when securely caught in stitching. NOTE: Raw edge not securely caught in stitching shall be classified as an open seam.		210
Seam and stitch type	Wrong seam or stitch type.	126	
Bartacks	Any bartack omitted. Any bartack not as specified or not in specified location. Loose stitching, incomplete or broken.	127	 211 212
Stitch tension	Loose, resulting in loose bobbin or top thread. Excessively tight, resulting in puckering of material.		213 214
Stitches per inch	Up to two (2) stitches less than minimum specified. Three (3) or more stitches less than minimum specified. One (1) or more stitches in excess of maximum specified. NOTE: Variation in the number of stitches per inch caused by the operator speeding up the machine and pulling the fabric in order to sew over heavy seams, or in turning corner shall be classified as follows: (a) Within the minor defect classification no defect. (b) Within the major defect classification minor defect.	 128	215 216
Stitching ends	Not secured as specified.		217
Thread breaks, skipped stitches, or run-offs	Not overstitched as specified. NOTE: Thread breaks or two (2) or more consecutive skipped or run-off stitches not overstitched shall be classified as open seams.		218
Rows of stitching	Any row missing except on box, and box-x stitching. On box, and box-x stitching: - one (1) row of stitching omitted. - two (2) or more rows of stitching omitted.	 129 130	 219

TABLE V. Defect examination - Continued

Examine	Defect	Classification	
		Major	Minor
Component and assembly	Any component part omitted or not as specified or any operation omitted or not as specified (unless otherwise classified herein).	131	
	Needle chews.	132	
	Any mend, darn, patch, splice or other unauthorized repair.	133	
	Any material pleated or caught in stitching where not specified.		220
Stiffener, plastic film	Chip, cut, crack, splinter, broken end or space, failing to serve intended purpose.	134	
Binding	Loosely applied but not exposing raw edge of material.		221
	Loosely applied exposing raw edge of material.	135	
	Ends of binding on pocket flap not caught in seams.		222
Darts (on pouch pocket flaps)	One (1) or more omitted.		223
	Not formed and sewn separately on pouch pocket flap as specified	136	
Pouches	Pocket is single ply construction.	137	
	Pocket or flap not formed as specified.		224
	Flaps improperly set or distorted failing to affect a full and smooth closure.	138	
	Binding tape not securely attached.		225
Cleanness	Grease, oil, dirt or ink stains clearly noticeable.		226
	Thread ends not trimmed as specified.		227
Location markings	Drilled.	139	
	Printed marking more than 1/32-inch in width or not covered by component part.		228
Markings: US identification and instructions	Omitted, incorrect, illegible, or misplaced, or size of characters not as specified.		229
Checklist	Omitted, incorrect, illegible.		230

4.3.3 Dimensional examination. The completed Medic Set or individual components (when purchased separately) shall be examined for the defects listed in Table VI. The sample unit shall be one (1) Medic Set or individual component unless otherwise specified.

TABLE VI. End item dimensional examination.

Examine	Defect	Classification	
		Major	Minor
Dimensions (overall)	Smaller than nominal dimensions less applicable minus tolerance indicated on drawings, but not smaller than nominal dimensions less twice the applicable minus tolerance.		231
	Smaller than nominal dimensions less twice the applicable minus tolerance.		233
	Larger than nominal dimensions and applicable plus tolerance.	140	
Component and location dimensions	Not within specified tolerance.		234
Stitch margin or gauge	Not within specified tolerance.		235
Box, box-x and stitching	Dimensions not within specified tolerance.		236
Eyelets	Not spaced on equipment within specified dimensions.		237

4.4 Methods of inspection.

4.4.1 Spectral reflectance measurements in the visible/near infrared (webbings Class 1, 4, 5, 6, 7, and 8 only). Spectral reflectance data shall be obtained from 600 to 860 nanometers (nm) at 20 nm intervals, on a spectrophotometer (see 6.4) relative to a barium sulfate standard, the preferred white reference standard. Other white reference materials may be used, provided they are calibrated to absolute white; e.g, Halon, magnesium oxide, or vitrolite tiles (see 6.6). The spectral bandwidth shall be less than 26 nm at 860 nm. Reflectance measurements may be made by either the monochromatic or polychromatic mode of operation. When the polychromatic mode is used, the spectrophotometer shall operate with the specimen diffusely illuminated with the full emission of a source that simulates either CIE Source A or CIE Source D65. Measurements should be taken backed with layers of the same shade so that no light can be detected through the sample. Measurements will be taken on a minimum of two different areas and the data averaged. The specimen shall be viewed at an angle not greater than 10 degrees from normal with the specular component included. Photometric accuracy of the spectrophotometer shall be within 1 percent and wavelength accuracy within 2 nm. The standard aperture size used in the color measurement device shall be 1.0 to 1.25-inches in diameter. When the measured reflectance values for any color at three (3) or more wavelengths do not meet the limits specified in Table II, it shall be a test failure.

4.4.2 Visual shade matching. The color of the finished nylon, raschel knit cloth and components shall be as specified in the contract and shall match the standard sample when viewed using AATCC Evaluation Procedure 9, with source simulating artificial daylight D75 illuminant

with a color temperature of 7500 (± 200)°K illumination of 100 (± 20) foot candles, and shall be a good match to the standard sample under incandescent lamplight at 2856 (± 200)°K.

5. PACKAGING

5.1 Packaging. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

6. NOTES

(This section contains information of a general or explanatory nature that may be helpful, but is not mandatory or contractually binding).

6.1 Intended use. The combat Improved MOLLE Medic System (IMMS) is intended to be used by medic personnel primarily to carry medical supplies and can be used to carry munition supplies and strobe lights.

6.2 Acquisition requirements. Acquisition documents should specify the following:

a. Title, number and date of this purchase description
b. Class required (see 1.2)
c. When a first article is required (see 3.1 and 4.2)
d. Material testing requirements as required (see 4.3.1.2)
e. Packaging (see 5.1)

6.3 Standard samples, specifications/drawings and pattern drawings. For access to the standard samples of finished fabrics and the camouflage pattern drawings, if applicable, address the contracting activity issuing the invitation for bids or request for proposal.

6.4 One Wrap®, HTH 888, part no 121358 is a trademark of Velcro USA, 406 Brown Ave. PO Box 5218, Manchester, NH, 03108 Phone 800-225-0180.

6.5 Spectrophotometers. Suitable spectrophotometers for measuring spectral reflectance in the visible/near infrared are the Diano Hardy, Diano Match Scan, Hunter D54P-IR, Hunter VIS/NIR spectrocolorimeter and Macbeth 1500 with IR options.

6.6 Deleted.

6.7 Subject term (key word) listing.

Arctic White
Desert Camouflage (3 color)
First Aid
Marine Pattern (MARPAT) Desert
Marine Pattern (MARPAT) Woodland
MOLLE (Modular Lightweight Load-Carrying Equipment)
Operation Enduring Freedom Camouflage Pattern (OEF-CP)
Operational Camouflage Pattern (OCP)
Universal Camouflage Pattern (UCP)
Woodland Camouflage

Custodian: Army-GL

Preparing Activity: Army-GL