

MIL-B-51170F(EA)

15 August 1983

SUPERSEDING

MIL-B-51170E(EA)

7 April 1983

MILITARY SPECIFICATION

BAG, WATERPROOF, CHEMICAL-BIOLOGICAL MASK, M1

This specification is approved for use by US Army Armament, Munitions and Chemical Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

1. SCOPE

1.1 Scope. This specification covers one type of chemical-biological mask waterproof bag.

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Specifications, standards, and handbooks. Unless otherwise specified, the following specifications, standards, and handbooks of the issue listed in that issue of the Department of Defense Index of Specifications and Standards (DoDISS) specified in the solicitation form a part of this specification to the extent specified herein.

SPECIFICATIONS

FEDERAL

L-P-375 - Plastic Film, Flexible, Vinyl Chloride.
 PPP-T-42 - Tape, Packaging/Masking, Paper.

: Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, Armament Research and Development Center, US Army Armament, Munitions and Chemical Command, ATTN: DRSMC-TSC-S(A), Aberdeen Proving Ground, MD 21010 by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

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MIL-STD-105 - Sampling Procedures and Tables for Inspection by Attributes.

2.1.2 Other Government documents, drawings, and publications. The following other Government documents, drawings, and publications form a part of this specification to the extent specified herein.

DRAWINGS

US ARMY ARMAMENT, MUNITIONS AND CHEMICAL COMMAND

CHEMICAL RESEARCH AND DEVELOPMENT CENTER

C5-75-2 - Bag, Waterproof, Chemical-Biological Mask, M1.

(Copies of specifications, standards, handbooks, drawings, and publications required by manufacturers in connection with specific acquisition functions should be obtained from the contracting activity or as directed by the contracting officer.)

2.2 Other publications. The following documents form a part of this specification to the extent specified herein. The issues of the documents which are indicated as DoD adopted shall be the issue listed in the current DoDISS and the supplement thereto, if applicable.

ASTM STANDARDS

D412 - Tension Testing of Rubber.

(Copies may be obtained from ASTM, 1916 Race Street, Philadelphia, PA 19103.)

2.3 Order of precedence. In the event of a conflict between the text of this specification and the references cited herein, the text of this specification shall take precedence.

3. REQUIREMENTS

3.1 Materials. All materials cited on Drawing C5-75-2 and its subsidiary drawings shall conform to the specifications listed thereon, or to the specific characteristics set forth on the drawings.

3.2 Assembly. The M1 waterproof bag shall be assembled in accordance with Drawing D5-75-8.

3.3 Bag leakage. The plastic bag shall not leak when filled to a depth of 15 inches of water for 15 minutes and when tested as specified in 4.4.4.1.

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3.4 Marking. The bag shall be marked in accordance with Drawing D5-75-3 and no more than five characters may be illegible when tested as specified in 4.4.4.2.

3.5 Preproduction sample. Prior to the start of regular production, a preproduction sample of Bag, Waterproof, Chemical-Biological, M1 shall be produced in accordance with this specification for examination and tests (see 4.3). Any change in materials, equipment or manufacturing conditions shall require a new preproduction sample.

3.6 Seam strength. The bag seams shall withstand a minimum pull of 3.0 pounds when tested as specified in 4.4.4.3.

3.7 Workmanship. The bag shall be free from damage (cuts, tears, abrasions, or punctures) and foreign matter (dirt, grease, or oil). The seams shall be uniform, continuous, and free from wrinkles and bubbles.

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection.

4.1.1 Contractor's responsibility. Unless otherwise specified in the contract or purchase order, the contractor is responsible for the performance of all inspection requirements 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 specified herein, 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.

4.1.2 Objective evidence. The contractor shall provide objective evidence acceptable to the contracting officer that the requirements of 3.1 and section 5 for which specific inspection has not been provided in this specification have been satisfied.

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

- (a) Preproduction inspection (see 4.3).
- (b) Quality conformance inspection (see 4.4).

4.3 Preproduction inspection.

4.3.1 Sample. A preproduction sample of 20 waterproof bags, M1 and 21 square feet of plastic, vinyl, flexible shall be produced using the same methods, materials, and equipment as will be used during regular production.

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4.3.2 Inspection procedure.

4.3.2.1 For examination. The sample bags shall be inspected for all requirements of the drawings and this specification.

4.3.2.2 For tests. Preproduction sample bags shall be tested in accordance with 4.4.4. Ten (10) of the sample bags shall be tested for bag leakage and marking and the other 10 for seam strength. Preproduction sample of plastic film shall be tested for all requirements of L-P-375.

4.3.3 Acceptance/rejection criteria. The preproduction bags shall meet the examination and tests specified in 4.3.2 to be acceptable. The contractor shall obtain written approval from the contracting officer before proceeding with regular production.

4.4 Quality conformance inspection.

4.4.1 Lotting. A lot shall consist of the bags produced by one manufacturer, at one plant, from the same materials, under essentially the same manufacturing conditions. However, no more than one lot of vinyl film shall be represented in any one lot of finished bags.

4.4.2 Sampling.

4.4.2.1 For examination and nondestructive tests. Sampling shall be conducted in accordance with MIL-STD-105. For defects 103 and 104 in 4.2.3.3(b), level S-4 shall be used.

4.4.2.2 For destructive tests. Sampling shall be conducted in accordance with MIL-STD-105, level S-1.

4.4.3 Inspection procedure.

4.4.3.1 For examination and nondestructive tests. Sample bags shall be examined in accordance with the classification of defects and MIL-STD-105.

4.4.3.2 For destructive tests. Sample bags shall be tested in accordance with 4.4.4.3 and MIL-STD-105, using an AQL of 2.5 percent defective for each test.

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4.4.3.3 Classification of defects.

(a) Bag, waterproof, chemical-biological mask, M1 (Drawing C5-75-2).

<u>Categories</u>	<u>Defects</u>	<u>Acceptance standards</u>
<u>Critical:</u>	None defined	
<u>Major:</u>	AQL 1.0 percent defective	
101	Component missing or incorrectly assembled	
102	Pouch inside dimension incorrect	
103	Workmanship (3.6)	

(b) Bag, waterproof (Drawing D5-75-3).

<u>Categories</u>	<u>Defects</u>	
<u>Critical:</u>	None defined	
<u>Major:</u>	AQL 1.0 percent defective	
101	Bag overall dimension incorrect	
102	Radius missing	
103	Bag leakage	4.4.4.1
104	Bag marking incorrect or illegible	4.4.4.2

4.4.4 Tests. Tests shall be conducted as follows:

4.4.4.1 Bag leakage. Suspend each bag to be tested in an upright position by means of at least four widemouth clamps attached to the open end. Fill the bag with water to a depth of 15 inches. To avoid condensation of water from the surrounding air the water should be at approximately room temperature. Let the water-filled bag hang 15 minutes and examine the outside of the bag for leakage.

4.4.4.2 Marking. Submerge each bag to be tested in water at $70^{\circ} \pm 5^{\circ}\text{F}$ for 30 minutes so that the printing will be wet. Remove the bag from the water and wipe dry. Within 4 minutes after removing from the water, apply 5 inches of 1/2 by 6-inch strips of masking tape conforming to type II of PPP-T-42 at right angles to the printed lines so that at least 45 letters are covered. Place the bag on a hard smooth surface and roll a 10-pound, hard-surfaced, hinged roller with a diameter of approximately 5 inches over the applied strips three times. The roller shall travel at approximately 12 inches per 10 seconds. A strip of paper may be applied to the adhesive side of the extending 1-inch section of

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the tape to prevent adhesion to the bag during rolling. Immediately after application, double back the free end of the tape at about 180 degrees and peel the tape slowly and evenly from the bag. Examine the printing for compliance with 3.4.

4.4.4.3 Seam strength. Die one dumbbell specimen conforming to die A of ASTM D412 from each sample bag. The full width of the seam shall be within the constricted portion of the specimen and the long dimension of the specimen shall be approximately perpendicular to the seam. Condition the specimens at $70^{\circ} + 5^{\circ}\text{F}$ for a minimum of one-half hour. Test the specimens in accordance with method 8311, Seam Strength Test of Fed. Std. No. 601.

5. PACKAGING

5.1 Unit packing, packing, and marking, interplant shipment (see 6.3). The waterproof bags shall be unit packed and packed to provide adequate protection from physical damage from the supply source to the first receiving activity for immediate use or further processing. Shipping containers shall be in compliance with the rules and regulations applicable to the mode of transportation. Marking shall be in conformance with Fed. Std. No. 123.

5.2 Repair parts. When waterproof bags are procured for storage and issue as repair parts, preservation, unit packing, packing and marking shall be as specified on the packaging data sheet which is identified by the National Stock Number.

6. NOTES

6.1 Intended use. The M1 bag is intended to be used for waterproofing chemical-biological masks.

6.2 Ordering data. Acquisition documents should specify the title, number, and date of this specification.

6.3 Interplant shipment. Packaging for interplant shipment is for supplies and materials that do not enter the military supply system. Typical interplant shipments are shipments from a vendor to a subcontractor or a prime contractor, or from a vendor or contractor to a military arsenal or plant.

Custodians:

Army - EA

Preparing activity:

Army - EA

Project No. 4240-A798

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions -- Reverse Side)

1. DOCUMENT NUMBER MIL-B-51170F(EA)		2. DOCUMENT TITLE BAG, WATERPROOF, CHEMICAL-BIOLOGICAL MASK, M1	
3a. NAME OF SUBMITTING ORGANIZATION		4. TYPE OF ORGANIZATION (Mark one)	
b. ADDRESS (Street, City, State, ZIP Code)		<input type="checkbox"/> VENDOR	
		<input type="checkbox"/> USER	
		<input type="checkbox"/> MANUFACTURER	
		<input type="checkbox"/> OTHER (Specify): _____	
5. PROBLEM AREAS			
a. Paragraph Number and Wording:			
b. Recommended Wording:			
c. Reason/Rationale for Recommendation:			
6. REMARKS			
7a. NAME OF SUBMITTER (Last, First, MI) -- Optional		b. WORK TELEPHONE NUMBER (Include Area Code) -- Optional	
c. MAILING ADDRESS (Street, City, State, ZIP Code) -- Optional		8. DATE OF SUBMISSION (YYMMDD)	