

INCH-POUND

MIL-H-45444B (AR)
 AMENDMENT 4
 9 September 1992

 SUPERSEDING
 AMENDMENT 3
 1 MAY 1978

MILITARY SPECIFICATION

HMX

This Amendment forms a part of military Specification MIL-H-45444B (AR) dated 28 February 1974 and is approved for use by the U.S. Army Armament, Munitions and Chemical Command and is available for use by all Department and Agencies of the Department of Defense.

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Paragraph 2.2 After the second sentence ending.. "shall apply" add the following:

"AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)

ASTM Designation D882 - Tensile Properties of Thin Plastic Sheeting

(Application for copies should be addressed to the American Society for the Testing and Materials, 1916 Race Street, Philadelphia, PA 19103.)

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Paragraph 4.2.2 Delete in its entirety and substitute:

"4.2.2 Examination. Sampling plans and procedures for the following classification of defects shall be in accordance with MIL-STD-105 (ABC-STD-105), except that the inspection for critical defects shall be 100 percent. Contractor's sampling plans, if used, shall be approved by the Government and shall provide, as a minimum, the protection afforded the Government by the sampling plans in MIL-STD-105. Continuous sampling plans in accordance with MIL-STD-1235 may be used if approved by the procuring activity.

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Paragraph "4.4.2.1, 4.4.2.2, 4.4.2.3, 4.4.2.4, and 4.4.2.5" Delete in their entirety and substitute: Paragraphs "4.2.2.1, 4.2.2.2, 4.2.2.3, 4.2.2.4, 4.2.2.5, and 4.2.2.6" respectively as follows:

AMSC N/A

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FSC 1376

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CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH	TITLE	SHEET 1 OF 1		DRAWING NUMBER
		1	1	
4.2.2.1	Bag, Cloth			NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	COMPLIANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
<u>Critical</u>	None defined			
<u>Major</u>	Foreign matter	0.40%	-	Visual
101	Bag pierced or torn	0.40%	5.1	Visual
102	Not tied or improperly tied	0.40%	5.1	Visual
103				
<u>Minor</u>	None defined			
NOTES:				

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CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER
4.2.2.2	Sealed Rubber Bag		NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH
<u>Critical</u>	None defined		
<u>Major</u>	Bag improperly closed	0.65 X	5.1
101	Bag damaged	0.65 X	5.1
102	Insufficient solution	0.65 X	5.1
103	Insufficient alcohol in solution	0.65 X	5.1
104	Net weight	0.65 X	5.2
105			
<u>Minor</u>	None defined		
			Visual/Manual Visual *See notes *See notes *See notes
NOTES: *Inspection will be accomplished by witnessing procedures used by contractor to comply with requirements.			

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CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH 4.2.2.3	TITLE Polyethylene Bag	SHEET 1 of 1	DRAWING NUMBER
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH
NOTES:	INSPECTION METHOD REFERENCE		
<u>Critical</u>	None defined		
<u>Major</u> 101	Seam splits when manual pressure is applied along entire length of seam	0.65%	5.1
102	Bag damaged	0.65%	5.1
<u>Minor</u>	None defined		
			Visual/Manual Visual

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER
4.2.2.4	Tied Polyethylene Bag		NEXT HIGHER ASSEMBLY
CLASSIFICATION	EXAMINATION OR TEST	CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH
<u>Critical</u>	None defined		
<u>Major</u>			
101	Bag improperly closed	0.65 \$	5.1
102	Bag damaged	0.65 \$	5.1
103	Insufficient solution	0.65 \$	5.1
104	Insufficient alcohol in solution	0.65 \$	5.1
105	Net weight	0.65 \$	5.2
<u>Minor</u>	None defined		
			Visual Visual *See notes *See notes *See notes
<p>INSPECTION METHOD REFERENCE</p>			
<p>NOTES: * Inspection will be accomplished by witnessing procedures used by contractor to comply with requirements.</p>			

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CLASSIFICATION OF CHARACTERISTICS

PARAGRAPH	TITLE	SHEET 1 OF 1		CONFORMANCE CRITERIA	REQUIREMENT PARAGRAPH	INSPECTION METHOD REFERENCE
		DRAWING NUMBER	NEXT HIGHER ASSEMBLY			
CLASSIFICATION	EXAMINATION OR TEST					
4.2.2.5	Drums with Cover and Locking Ring Before Closing					
<u>Critical</u>	None defined					
<u>Major</u> 101 102	Top chime bent, deformed or cut Bottom chimes collapsed (annular groove closed or partially closed) or deformed	0.65 %	5.2	Visual		
103 104 105	Body bulged, cut or dented Gasket in cover missing or damaged Cover bent, creased or deformed in gasket area or around edge Locking ring damaged so as to prevent closing	0.65 % 0.65 % 0.65 %	5.2 5.2 5.2	Visual Visual Visual		
106		0.65 %	5.2	Visual		
<u>Minor</u> 201	Outer body surface seriously scuffed or metal scratched through galvanized surface	0.65 %	5.2	Visual/Manual		
202	Nicks or dents in chimes or cover not affecting function	0.65 %	5.2	Visual		
203	Locking ring bent or deformed	0.65 %	5.2	Visual		

NOTES:

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PARAGRAPH	TITLE	SHEET 1 OF 1	DRAWING NUMBER	INSPECTION METHOD REFERENCE	EXAMINATION OR TEST	COMPLIANCE CRITERIA	REQUIREMENT PARAGRAPH
CLASSIFICATION							
4.2.2.6	Sealed Drum						
<u>Critical</u>							
Major 101 102 103	None defined Alcohol solutions leaking from drum Cover or locking band improperly seated Seal missing or improperly applied	0.65% 0.65% 0.65%	5.2 5.2 5.2	Visual/Manual Visual Visual			
Minor 201	Marking missing, incorrect or illegible	0.65%	5.3	Visual"			
NOTES:							

Replaces 1570, 1 Feb 05, which may not be used.

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Paragraph 4.2.3, second sentence:

After "AQL 4.0%" add "(see 4.2.1 for use of MIL-STD-105 as an alternate when applicable)".

PAGES 17 and 18

Section 5: Delete in its entirety and substitute:

"5. PACKAGING

5.1 Preservation and packaging.

5.1.1 Level A and Level B. Unless otherwise specified by the procuring activity, HMX will be preserved and packaged as follows: Not more than 50 pounds dry weight, of the wet HMX shall be packed in a cloth bag described in 5.1.1.2. Filled cloth bags shall be placed in a rubber bag, rubberized cloth bag or two polyethylene bags, described in 5.1.1.1, placed one inside the other. Sufficient water, if necessary, and isopropyl alcohol shall be added to the outer bag so that a solution of 40 percent isopropyl alcohol and 60 percent water makes up at least 10 percent by weight of the contents of the outer bag. Inner and outer bags shall be securely tied with the polyethylene bags individually tied, using non-metallic tape or cord. The tops of the outer bags shall be gathered and formed into a gooseneck when being tied.

5.1.1.1 The polyethylene bags shall comply with Type II, Style 1 of Specification PPP-B-26 except that closure will not be heat sealed. The bag size shall be approximately 31 inches flat width by 55 inches in length. The bag seams shall meet the seam strength test with an AQL of 0.65 percent at 50 percent of the breaking strength of the polyethylene film. The seam strength test shall be performed in accordance with Method A of ASTM D882 using one-inch wide specimens. Seams shall also be examined by separating the bag face and applying pressure manually along the entire length of the seam. Seams which can be opened at any point in this manner are not acceptable.

5.1.1.2 The cloth bags shall be made from white cotton twill, free of size and brighteners, complying with the general requirements of Specification CCC-C-461 and the following detailed requirements:

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Yarn	Carded
Yarn Ply	Warp 12/1 Fill 18/1
Weight	7.2 + 0.5 oz/sq yd (Greige) 6.0 + 0.7 oz/sq yd (after bleaching)
Yards per inch (minimum)	Warp 78 Fill 47
Breaking Strength (minimum)	Warp 170 Fill 70
Weave	3 X 1

A suggested bag size is 19 inches wide by 29 inches in depth. The tie tape may be attached to the bag by sewing. Alternatively, double filled gray cloth cotton duck weighing not less than 1/2 oz. per square yard may be used for the bag.

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- * Paragraph 5.1.1.2 Delete "Weave 3 X 1 twill" and substitute "Weave 2 X 1 twill".

5.2 Packing.

5.2.1 Level A. A maximum of 300 pounds dry weight of crystalline HMX packaged in accordance with 5.1 shall be packed in an outer bag which has been placed in a drum complying with Department of Transportation Specification 5 or 5B of the Code of Federal Regulations 49 CFR 100-199.

5.2.2 Level B. 225 pounds maximum, dry weight, of crystalline HMX packaged in accordance with 5.1 shall be packed in a fiber drum complying with DOT specification 21C (approximate gross weight of 300 pounds) and the following requirements. The drum shall be approximately 18 1/2 inches in diameter by 26 inches in height, inside dimensions. The drum shall have a 24-gauge steel cover with a rubber gasket, level locking band with provisions for sealing wire and wide bottom chime (2-inch minimum formed height). All metal parts shall be hot dip galvanized and chimes shall be welded. Bottom chimes shall be 0.028 inch steel and top chimes shall be 0.025 inch steel. The body shall be wound with hot melt or thermoplastic

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adhesive and the seam covered with a hot sealed tape. The inner surface of the bottom and body shall have a laminated liner of 0.002 inch thick polyethylene. The bottom crimp shall be caulked. The finished drum including closure shall be leak tight construction suitable for liquid contents.

5.3 Marking. Containers shall be marked as required by the Code of Federal Regulations 49 CFR 100-199. In addition, shipments shall be marked in accordance with Standard MIL-STD-129. Each container shall be clearly labelled with the lot number and net weight of its contents. When a container holds HMX from more than 1 lot, all lot numbers shall be shown on the label and each of the small bags inside the container shall be clearly and permanently labelled with the lot number of its contents."

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Paragraph 6.7, first sentence:

Delete "paragraph 4-222" and substitute "paragraph 5-222.3".

The margins of this amendment are marked with an asterisk or vertical line to indicate where changes (additions, modifications, corrections, deletions) from the previous amendment were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous amendment.

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