

MIL-H-44099A

22 December 1986

SUPERSEDING

MIL-H-44099

23 March 1983

MILITARY SPECIFICATION

✓ HELMET, GROUND TROOPS AND PARACHUTISTS

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

1. SCOPE

1.1 Scope. This document covers a ballistic protective helmet consisting of a laminated coated aramid cloth shell with a replaceable suspension assembly, headband, and chin strap.

1.2 Classification. The helmet assembly shall be of one type and in the following sizes as specified (see 6.2).

X-Small

Small

Medium

Large

2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 Documents. The following documents form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents shall be those listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to U.S. Army Natick Research, Development, and Engineering Center, Natick, MA 01760-5014, by using the self-addressed Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A

FSC 8470

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2.3 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 shall take precedence. Nothing in this document, however, shall supersede applicable laws and regulations unless a specific exemption has been obtained.

3. REQUIREMENTS

3.1 Guide samples. Samples, when furnished, are solely for guidance and information to the contractor (see 6.4). Variations from this document may appear in the sample, in which case this document shall govern.

3.2 First article. When specified in the contract or purchase order, a sample shall be subjected to first article inspection (see 4.3, 6.2, and 6.3).

3.3 Materials and components. All materials and components shall be as specified herein or on the applicable drawings (see 6.6).

3.3.1 Cloth, ballistic, aramid. The aramid ballistic cloth for the helmet shell shall conform to type II, class I of MIL-C-44050.

3.3.1.1 Laminating resin. The resin for coating and laminating the reinforcing material shall be a catalyzed system composed of 50 percent phenol formaldehyde and 50 percent polyvinyl butyral resins (see 6.5). The resin shall be pigmented to match the color of the coating specified in 3.3.4.

3.3.2 Rubber edging. The edging shall be made of a rubber compound matching color Olive Drab 34087 of FED-STD-595 and shall conform to the grade, type, class, and suffix requirements of 3BC615A14F17Z of ASTM D 2000 and MIL-R-3065. The suffix letter Z indicates the special requirement that the edging when used in conjunction with the specified adhesive in 3.3.3 and procedure specified in 3.4.2 shall meet the adhesion requirements of 3.5.3. The edging design and dimensions shall conform to Drawing 8-2-644. The length shall be sufficient to conform with the contours of the helmet. As an option, the edging may be a one-piece molded construction.

3.3.3 Adhesive. The adhesive for bonding the rubber edging shall be of a synthetic rubber base type.

3.3.4 Coating. The coating for finishing the helmet shell (see 3.4.3.2) shall conform to MIL-C-46168, color Olive Drab 34087 of FED-STD-595.

3.3.5 Texturing of coating. Texturing aggregate incorporated in the second coat (see 3.4.3.2) for the exterior of the helmet shall be silica sand or walnut shell flour.

c. That the paper used in the instruction booklet meets the requirements specified in 3.8.

d. That the screws for mounting the suspension assembly and chin strap conform to the contractor's part number specified on Drawing 8-2-644.

4.4.2 In-process inspection. In-process inspection shall be performed on the individual layers that will be used to form an assembled preform and also on preform assemblies before molding to verify compliance with the Government approved method and the requirements specified in 3.4.1.1.1 or 3.4.1.1.2 as applicable. Every preform assembly shall be examined for the critical defects in table II. All preform assemblies with any critical defect shall be rejected.

TABLE II. Preform assembly defects

Examine	Defect	Classification
Construction	Number of plies of aramid cloth is not as approved	X
	Composition of material is not as specified	X
	Final configuration is not as approved	X

4.4.2.1 Mold and hole location authorization. Prior to beginning production under any contract (see 6.2), one helmet shell produced from each mold shall be submitted directly off the mold (with the only finishing operation being holes drilled) to the contracting activity for examination for conformance to the specified shell dimensions and hole locations. Approval of the shell will authorize that mold for use in production under that contract. Any change to the mold, drilling process, molding process, or materials shall require reauthorization.

4.4.2.2 Visual examination of helmet shell prior to finishing (immediately off the mold). Prior to the finishing operation, every helmet shell shall be examined for any evidence of a blister or delamination. Any blister or