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SUPERSEDING

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MILITARY STANDARD
MASK, CHEMICAL BIOLOGICAL



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FOREWORD

1. This Military Standard is approved for use by all Departments and Agencies of the Department of Defense.
2. Beneficial comments (recommendations, additions, deletions) and any pertinent data which may be of use in improving this document should be addressed to: Commander, U.S. Army Chemical Research, Development and Engineering Center, ATTN: SMCCR-PET-S, 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.
3. This book format standard on masks, chemical biological is approved for use by all departments and agencies of the Department of Defense in the selection of items for application. It is intended to prevent the entry of unnecessary items (sizes, types, varieties) into the Department of Defense logistics system. This is not a procurement document.

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1. SCOPE

1.1 Coverage. This standard is a presentation of nomenclature, symbols, and requirements, directions for use, packaging data, labeling, general safety precautions, storage information, and shelf life of military chemical biological masks and certain related items. This standard does not necessarily include all classifications of the items represented by the title. It does contain items preferred for use in the selection of chemical biological masks and related items for application by the Department of Defense.

1.2 Application. Items listed herein accommodate essential requirements of the military and defense agencies, and will effect continued economies in all logistics functions when properly employed in new applications.

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2. APPLICABLE DOCUMENTS

2.1 Government documents.

2.1.1 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 listed in the issue of the Department of Defense Index of Specifications and Standards (DODISS) and supplement thereto, cited in the solicitation.

SPECIFICATIONS

MILITARY

MIL-C-10116	Canister, M11
MIL-M-12296	Mask, Protective, Field, M9A1
MIL-C-13864	Canister, Chemical Biological Mask, M10A1
MIL-M-50023	Mask, Protective, CD-V-805
MIL-C-51108	Carrier, Aircraft Chemical Biological Mask, ABC-M17
MIL-M-51113	Mask, Chemical Biological, Aircraft, ABC-M24
MIL-H-51143	Hood, Tank Chemical Biological Mask, ABC-M5
MIL-B-51170	Bag, Waterproofing, Chemical Biological Mask, M1
MIL-M-51178	Mask, Chemical Biological, Tank, ABC-M25
MIL-W-51255	Winterization Kit, Chemical Biological Mask, M4
MIL-W-51258	Winterization Kit, Facepiece Chemical Biological Mask, Tank, M3
MIL-H-51290	Hood, Aircraft Chemical Biological Mask, M7
MIL-H-51291	Hood, Chemical Biological Mask, M6A2
MIL-W-51348	Winterizing Kit, Protective Mask, M1
MIL-F-51425	Filter Element Set, Chemical Biological Mask, M13A
MIL-M-51495	Mask, Chemical Biological, Field, M17A

STANDARDS

MILITARY

MIL-STD-129 Marking for Shipment and Storage

(Unless otherwise indicated, copies of federal and military specifications, standards and handbooks are available from the Standardization Documents Order Desk, Building 4D, 700 Robbins Avenue, Philadelphia, PA 19111-5094.)

2.2 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.

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3. DEFINITIONS (Not applicable)

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4. GENERAL REQUIREMENTS

4.1 Packaging data and labeling. The masks, chemical biological and related items included in this standard shall be packaged in accordance with the specifications listed for that item or as specified in the contract or order. All containers shall be marked for shipment and storage in accordance with MIL-STD-129.

4.2 Safety. Only general safety precautions are outlined in this standard. For more specific information the applicable safety or medical authorities must be consulted.

4.3 Shelf life. Factors such as moisture, oil or grease, temperature, type and condition of containers, exposure to sunlight and the atmosphere cause variations in shelf life. Ideal storage conditions are outlined for each item. An approximate period of time after which these items will not longer be suitable for their intended use is also presented. The term "cool" denotes temperatures from above freezing up to 110°F when stored out of direct sunlight. The term "dry" is usually used to denote an area where condensation does not come in contact with the packages or contents (for example, storing on pallets away from walls in an enclosure or building). Periodic examination of the material or containers should be made more frequently when storage conditions vary from the ideal. All of the items covered in this standard containing rubber components are affected by sunlight and ozone and should be stored under proper conditions as specified. Each item should be examined prior to use. Shelf life is dated from the date of manufacture.

4.4 Use data. The masks, chemical biological, covered in this standard are used to protect military personnel, civil defense personnel, and DOD civilians against chemical agents, biological organisms, and radioactive dust and vapors. However, these items are not effective against carbon monoxide or ammonia, nor are these masks effective in confined spaces where the oxygen content of the atmosphere is too low to sustain life (below 16%). All masks included in this standard shall be products which have been tested with applicable specifications and meet the requirements listed therein. No authorization for the use of the masks, chemical biological, in industrial type operations is implied in this standard.

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5. DETAIL REQUIREMENTS

5.1 Name. BAG, WATERPROOFING, CHEMICAL BIOLOGICAL MASK, M1

5.1.1 Specifications. MIL-B-51170, Bag, Waterproofing, Chemical Biological Mask, M1.

5.1.2 Technical description. The waterproofing bag shall be constructed of flexible translucent plastic. Folded flat, it shall measure 19 inches in length by 13 inches in width. A small plastic envelope containing three rubber bands shall be inserted into the bag. When folded, the bag shall be inserted into a flexible translucent plastic pouch. The pouch shall be closed by a flap which is sealed to a metal strip, the ends of which shall protrude on either side of the pouch so that they can be bent inward to secure the flap when it is rolled down.

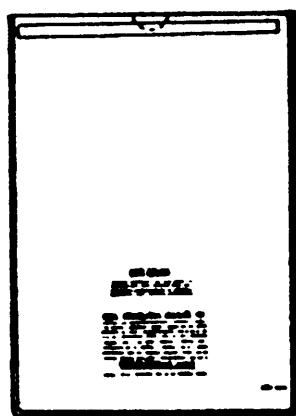


FIGURE 1. Typical illustration of Bag, Waterproofing Chemical Biological, Mask, M1.

5.1.3 Use data. The M1 waterproofing bag is intended for use by military personnel to keep chemical biological masks dry when required by climatic and operational conditions.

5.1.4 Packaging data. Two hundred fifty bags are packed within a snug-fitting, weather-resistant fiberboard box. The box is provided with a water-vaporproof liner which is heat-sealed, and all seams, corners, and the manufacturer's joint are taped to insure waterproofing.

5.1.5 Safety precautions. Do not store the mask in the waterproofing bag for more than 24 consecutive hours. Do not permit the bag to come into contact with foodstuffs; possible poisonous effects may result.

5.1.6 Storage data. The waterproofing bag should be stored in a cool, dry place. When stored under ideal conditions the bags have an indefinite shelf life.

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5.2 Name. CANISTER, CHEMICAL BIOLOGICAL MASK, M10A1.5.2.1 Specifications. MIL-C-13864, Canister, Chemical Biological Mask, M10A1.

5.2.2 Technical description. The body of the M10A1 canister shall be made of smooth sheet metal, cylindrical in shape, and painted olive drab. It shall have a straight nozzle at the top, to which a hose can be attached, and an inlet valve at the bottom, which shall be composed of an inlet valve seat and a rubber disc. A mechanical and chemical filter shall be located inside the canister body and supported by a perforated steel spacer. The mechanical filter consisting of layers of filter material and the chemical filter shall be filled with not less than 330 milliliters of impregnated charcoal encased in a perforated metal container.

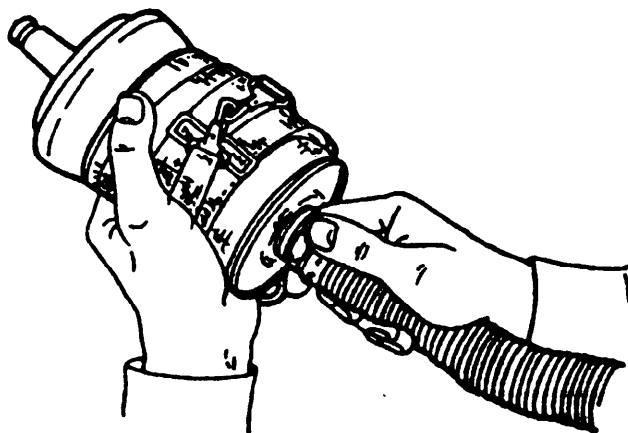


FIGURE 2. Typical illustration of Canister, Chemical Biological Mask, M10A1.

5.2.3 Use data. The canister M10A1 is intended for military use as a component of Masks ABC M14A2, ABC M24, and M25A1 to purify air for breathing, thus affording protection against chemical agents, biological organisms, and radioactive dust and vapors.

5.2.4 Packaging data. Each M10A1 canister is packaged in an air-tight container. Eighteen containers are packaged in a corrugated fiberboard box, each container separated by interlocking partitions. Filler is placed between the contents and the box to make a tight pack. The fiberboard box is closed and sealed with 3 inch wide, 60 pound, kraft, gummed tape.

5.2.5 Safety precautions. Canisters with rust or pitting along 10 percent of seams or joints should be discarded. Containers used to package the canisters shall not be used to store foodstuffs; possible poisonous effects may result.

5.2.6 Storage data. The packages containing canisters shall be stored in a dry area. When kept dry and free of rust or other deterioration the canisters will have a shelf life in excess of five years.

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5.3 Name. CANISTER, FIELD CHEMICAL BIOLOGICAL MASK, M11.

5.3.1 Specifications. MIL-C-10116, Canister, M11.

5.3.2 Technical description. The M11 canister consists of a gas (chemical) filter and a particulate (aerosol) filter housed in a metal body. The body of the canister is a squat cylinder of sheet aluminum and is painted gray. At one end of the body is an inlet opening; at the other end is a threaded nozzle for attaching the canister to the facepiece. The particulate filter is made of fluted or folded asbestos-bearing paper, which removes toxic liquid and solid particles from the influent air; the gas filter consists of ACS activated charcoal. The charcoal is held in place by the body of the canister between two fine filters, which consist of felted cotton cloth between disks of plastic netting. Perforated metal disks at the top and bottom of the canister protect the filling.

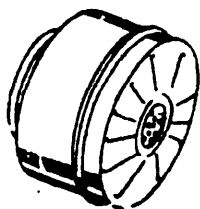


FIGURE 3. Typical illustration of Canister, Field Chemical Biological Mask, M11.

5.3.3 Use data. The M11 canister is a component part of Masks, M9, M9A1 and M16, and its intended military use is to purify air for breathing, those affording protection against chemical agents, biological organisms, and radioactive dust and vapors. Once the rubber plug and metal cap are removed from the canister, they must not be reattached.

5.3.4 Packaging data. Each M11 canister is packaged in an air tight container. Eighteen containers are packaged in a corrugated fiberboard box each container separated by interlocking partitions. Filler is placed between the contents and the box to make a tight pack. The fiberboard box is closed and sealed with a 3 inch wide, 60 pound, kraft, gummed tape.

5.3.5 Safety precautions. Canisters with corrosion or pitting along 10 percent of seams or joints should be discarded. Containers used to pack the canister shall not be used to store food stuffs; possible poisonous effects may result.

5.3.6 Storage data. The packages containing canisters shall be stored in a dry area. When kept dry and free of rust or other deterioration the canisters will have a shelf life in excess of five years.

5.4 Name. FILTER ELEMENT, CHEMICAL BIOLOGICAL MASK, M13A2

5.4.1 Specifications. MIL-F-51425, Filter Element Set, Chemical Biological Mask, M13A.

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5.4.2 Technical description. The filter element assembly shall be shaped to conform to the contours of the mask and shall be made specifically for either the right or left side. Each filter element assembly shall consist of a filter element of two layers of mineral fiber and charcoal, separated by a plastic stiffener, the outer surface of the filter overlaid with plastic mesh screening. An aluminum connector with a flange attached to the end will project through the facepiece of the mask to serve as a housing for the air inlet valve. The filter elements will be matched into pairs consisting of a right and left element whose air flow resistance does not have a pressure difference of more than 5 millimeters of water.

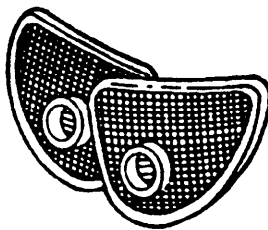


FIGURE 4. Typical illustration of Filter Element.
Chemical Biological Mask, M13A.

5.4.3 Use data. The M13A filter elements are intended for military use with the M17 and M17A1 Chemical Biological Masks, to purify air for breathing; thus affording protection against chemical agents, biological organisms, and radioactive dusts and vapors.

5.4.4 Packaging data. The M13A filter elements are packaged in matched pairs, in a heat-sealed, water-vaporproof, polyethylene bag. Filter elements are packaged to insure carrier acceptance and safe delivery at first domestic destination.

5.4.5 Safety precautions. Care shall be exercised to prevent the filter from getting wet. Water will destroy the effectiveness of the filter.

5.4.6 Storage data. The bags containing the filter elements shall be stored in a dry area to insure the filter elements a shelf life well in excess of five years.

5.5 Name. HOOD, CBR MASK, AIRCRAFT, ABC-M7

5.5.1 Specifications. MIL-H-51290, Hood, Aircraft, Chemical Biological Mask, M7.

5.5.2 Technical description. The M7 aircraft chemical biological hood shall be made of butyl-rubber-coated nylon cloth. It shall have an opening in the front of the hood which will fit in back of the inlet stem and around the rubber eyelens of the mask, a neck cord with a slide fastener which shall hold the hood closely around the neck cord with a slide fastener which shall hold the hood closely around the neck of the wearer, and a fastening cloth on the front edge of the hood and on the underside of the tabs to secure the adjustable

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underarm straps. The underarm straps will hold the cap of the hood in position on the back, shoulder, and chest of the wearer.

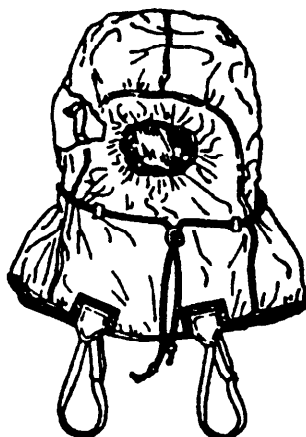


FIGURE 5. Typical illustration of Hood, CBR Masks, Aircraft, ABC-M7.

5.5.3 Use data. The M7 hood is intended for military use with the M24 CBR aircraft mask to protect the wearer against vapors, aerosols, and droplets of chemical and biological agents, and radioactive dusts and vapors.

5.5.4 Packaging data. Each M7 hood is packaged in a plastic bag. Twenty hoods are packed in an intermediate package, and four intermediate packages (80 hoods) packed for shipment in a fiber board box.

5.5.5 Safety precautions. Wash the hood when cleaning the mask on which it is used. If the hood is damaged, do not repair it.

5.5.6 Storage data. The M7 shall be stored in the bag in which it is received and kept in a cool, dry area to insure an indefinite shelf life.

5.6 Name. HOOD, CBR MASK, ABC M6A2

5.6.1 Specifications. MIL-H-51291, Hood, Chemical Biological Mask, M6A2.

5.6.2 Technical description. The M6A2 hood shall consist of a butyl-rubber-coated nylon cloth. Five reinforced openings in the hood will fit around the eye rings, the inlet valve assemblies, and the voicemitter valve frame. Two cords shall be attached to the inside of the mask, one on each side of the voicemitter outlet valve opening. A neck cord shall be attached around the neck of the hood with a neck cord fastener to draw the hood snugly around the neck. An interlocking slide fastener and a nylon pile tape locking device in the bib of the hood shall be provided as a means for ventilating the neck of the wearer. Two adjustable underarm straps shall hold the cape on the wearer's shoulders (See Figure 7).

5.6.3 Use data. The hood M6A2 is an accessory to the M17A1 mask and it is intended for military use to cover the head and neck of the wearer to provide protection against vapors, aerosols, and droplets of CBR agents.

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5.6.4 Packaging data. Each M6A2 hood is enclosed in a heat-sealed bag, fabricated from an opaque material. Twenty-five hoods, individually packaged, are intermediately packaged in a fiberboard box. Four intermediate packages (100 hoods) are placed in a fiberboard box with seams and manufacturer's joints sealed.

5.6.5 Safety precautions. Wash the hood when cleaning the mask on which it is used. If hood is damaged, do not repair it.

5.6.6 Storage data. The M6A2 hood shall be stored in a cool, dry storage area. So stored, it will have an indefinite shelf life.

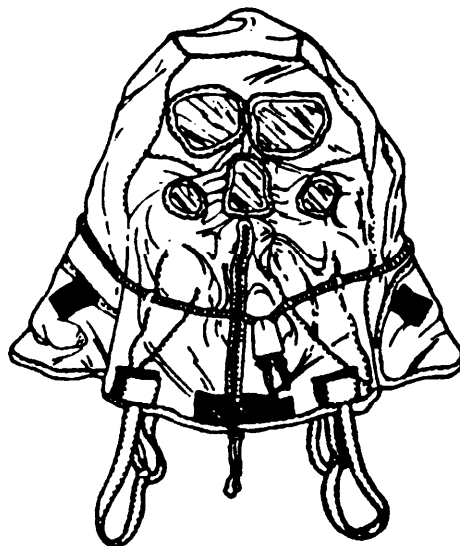


FIGURE 6. Typical illustration of Hood,
CBR Mask, ABC-M6A2.

5.7 Name. HOOD, CBR MASK TANK, ABC-M5

5.7.1 Specifications. MIL-H-51143, Hood, Tank, Chemical Biological Mask, ABC-M5.

5.7.2 Technical description. The M5 hood shall consist of a lightweight butyl-rubber-coated nylon cloth with an opening in the front of the mask to accommodate a lens in the facepiece. A neck cord and a slide fastener shall be provided to hold the hood closely around the neck. Two cords on the outside of the hood and two temple straps on the inside of the hood shall secure the hood to the facepiece and adjustable underarm straps attached to the bottom edge of the hood will hold the hood in position on the wearer's shoulders.

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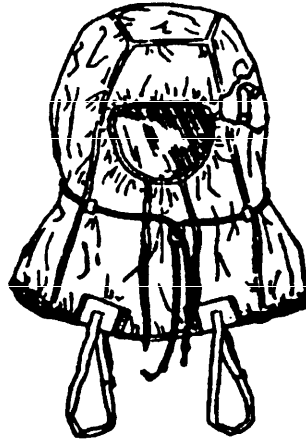


FIGURE 7. Typical illustration of Hood.
CBR Mask, ABC-M5.

5.7.3 Use data. The M5 hood is intended for military use to cover the head and neck of the wearer, and to provide protection against vapors, aerosols, and droplets of CBR agents.

5.7.4 Packaging data. Each M5 hood is packaged in a heat-sealed, water-vaporproof bag such as polyethylene. Twenty hoods are packed in an intermediate package and four intermediate packages (80 hoods) packed for shipment in a fiberboard box.

5.7.5 Safety precautions. Wash the hood when cleaning the mask on which it is used. If the hood is damaged, do not repair it.

5.7.6 Storage data. The M5 hood shall be stored in a bag in which it is received and kept in a cool, dry area to insure an indefinite shelf life.

5.8 Name. MASK, CBR, PROTECTIVE, SPECIAL PURPOSE, M9A1

5.8.1 Specifications. MIL-M-12296, Mask, Protective, Field, M9A1.

5.8.2 Technical description. The faceblank shall be made of molded rubber and contoured to fit the face. The eye pieces shall consist of lenses of safety glass (laminated glass or optically clear plastic) and metal eyerings. The eyerings are crimped to the rubber surrounding the lenses. The C15 outlet valve assembly is composed of a die-cast aluminum seat, a rubber disc, and a molded rubber cover. The canister mounting assembly provides a means for attaching the M11 canister to the facepiece and serves as the inlet valve for the mask. The canister mounting assembly may be either on the left or right side of faceblank, depending if the wearer shoots right or left handed. The nose cup is made of molded rubber and fits over the nose and mouth of the wearer and prevents fogging of the lenses. The C8 head harness consists of a rectangular head pad and six adjustable straps of 7/8 inch elastic webbing which are attached for buckling on the facepiece. The neck-strap assembly consists of a strap of elastic webbing,

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a buckle, and a fastener tab assembly, with a tab assembly. The facepiece shall be made in three sizes.

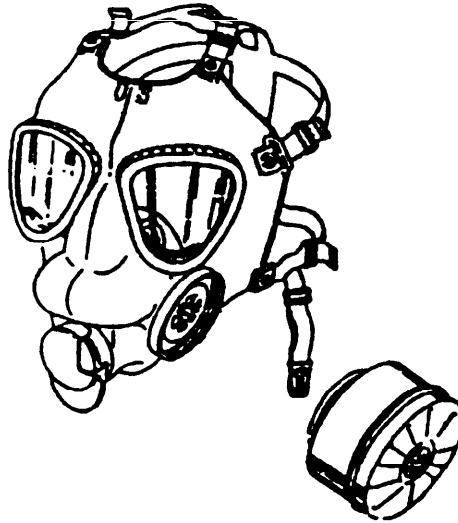


FIGURE 8. Typical illustration of Mask, CBR, Protective, Special Purpose, M9A1 and M11 Canister.

5.8.2.1 Carrier, Field Protective Mask, M11. The carrier shall be made of water-repellent olive drab cotton duck. It is a flat bag, with a flat closure secured by three snap fasteners. Three pockets are provided inside the carrier; two on the side and one on the bottom. The carrier has two carrying straps; one on the top of the carrier and one just below the middle of the carrier, parallel to the top of the carrier.

5.8.3 Use data. The M9A1 mask is intended for military use as a combat mask which protects the face, eyes, and respiratory tract of the wearer from field concentrations of chemical agents, biological organisms, and radioactive dust and vapors.

5.8.4 Packaging data. Each M9A1 mask is fitted with a faceform, to prevent distortion of the mask. The mask is placed in an airtight metal container. Six such containers may be packed in a metal, or fiberboard package for shipment.

5.8.5 Safety precautions. The canister of the mask will not give protection against carbon monoxide or ammonia gas. Prevent water from entering canister; water will destroy the effectiveness of the filter.

5.8.6 Storage data. Masks shall be stored in the containers in which they are received, and protected from sun, rain and dampness. When stored under these conditions, the shelf life of the mask will be in excess of eight years.

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5.9 Name. MASK, CBR, PROTECTIVE, FIELD, M17A25.9.1 Specifications. MIL-M-51495, Mask, Chemical Biological, Field, M17A.

5.9.2 Technical description. The M17A2 CBR mask shall consist of a rubber facepiece with pouches molded in the cheeks to hold filter elements. It shall have collars molded in the outer surface of the faceblank directly over the pouches to receive inlet valve assemblies; two optically clear plastic lenses, shaped and contoured, and held in place by aluminum alloy eyerings; a voicemitter outlet valve assembly to permit the wearer of the mask to communicate and to exhaust exhaled air; and a tube extending through the outlet valve assembly to permit the wearer to drink from a canteen without removal of mask. It shall have a head harness consisting of a rectangular head pad made of canvas webbing to which six adjustable elastic webbing straps are attached for buckling on the faceblank. The faceplate shall be available in four sizes, extra small, small, medium and large.

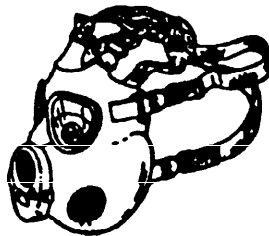


FIGURE 9. Typical illustration of Mask, Chemical Biological, Field, M17A2.

5.9.2.1 Eyelens outserts. Eyelens outserts shall be in one size and shape for use over either eyelens. Each outsert shall consist of a curved plastic lens seated in a soft rubber apron and shall fit closely over the eyering.

5.9.2.2 Carrier, Field Protective Mask, M15A1. The mask carrier shall be made of olive drab duck, with stiffeners at critical locations between fabric and liner. It shall be provided with a shoulder and waist strap; and four pockets, and shall be closed with a flap that is secured with snap fasteners.

5.9.3 Use data. The M17A1 mask is intended for military use as a combat mask which protects the face, eyes, and respiratory tract of the wearer from field concentrations of chemical agents, biological organisms, and radioactive dust and vapors.

5.9.4 Packaging data. Each mask is fitted with a faceform to prevent distortion of the facepiece, and secured in place with tape. Each mask is placed in a heat-sealed, water-vaporproof bag such as polyethylene. Each packaged mask is then placed in the canvas carrier and placed in an intermediate fiberboard box. Ten intermediate boxes are packed for shipment in a fiberboard box.

5.9.5 Safety precautions. The filters of the M17A1 mask will not give protection against carbon monoxide or ammonia gas. Be sure that the mask fits properly. Prevent the mask from getting wet as water will destroy the effectiveness of the filters.

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5.9.6 Storage data. Masks shall be stored in the boxes in which they are received and shall be protected from sun, rain, and dampness for a shelf life in excess of 10 years.

5.10 Name. MASK, CBR, CIVILIAN, M22

5.10.1 Specifications. MIL-M-50023, Mask, Protective, CD-V-805.

5.10.2 Technical description. The M22 mask consists essentially of a vinyl plastic, muzzle-shaped facepiece that is provided with plastic eyelens heat-sealed therein, six tabs for attaching the head harness, an outlet valve with cover, and a filter element that is the air purifying component. The filter element provides the muzzle shape to the mask and extends below the eyepieces sealed to the vinyl faceblank. The filter element is approximately 0.2 inches thick and consists of a core of pulverized ACS charcoal with fiberglass and plastic laminated and fused between external layers heat-sealed on both sides with glass fiber screening. A fiber board deflector attached on the inside of the facepiece passes air coming through the filter element over the eyelens so that fogging is minimized; in addition, the deflector maintains the proper shape of the mask during storage. The head harness is made of elastic webbing and is attached by adjusting buckles that are riveted to tabs on the facepiece. The mask is made in six sizes.

5.10.2.1 Carrier, Civilian Protective Mask, M16. The M16 carrier is a one piece rectangular vinyl plastic that is dielectric heat sealed on two sides. The carrier is provided with a flap closure that has a single snap fastener. On the rear of the carrier a plastic film loop strap approximately 3-1/2 inches long by 2-1/4 inches wide is dielectrically heat-sealed so the mask can be worn on a belt.

5.10.3 Use data. The M22 mask is intended for use by civilians except children below the age of four, to protect them against chemical and biological agents, and radioactive dust and vapors.

5.10.4 Packaging data. The M22 mask is packaged with the head harness positioned inside the facepiece, the mask is wrapped in tissue paper, secured with gummed tape and placed in the plastic carrier. Forty packaged masks are placed in a fiberboard box with four compartments, ten masks to a compartment, each mask alternately positioned.

5.10.5 Safety precautions. The filter of the M22 mask will not give protection against carbon monoxide or ammonia gas. Be sure the mask fits properly. Prevent the mask from getting wet as water will destroy the effectiveness of the filter.

5.10.6 Storage data. The M22 masks should be stored in the packages in which they are received and shall be protected from sun, rain, and dampness for a shelf life in excess of 5 years.

5.11 Name. MASK, CBR, PROTECTIVE, AIRCRAFT, ABC-M24

5.11.1 Specifications. MIL-M-51113, Mask, Chemical Biological, Aircraft, M24.

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5.11.2 Technical description. The C14R3 faceblank-and-lens assembly shall be a molded black rubber facepiece with a large flexible clear plastic lens cemented into the lens opening in the faceblank. It shall have an outlet valve stem, a cable stem, tabs for the head harness, and a flange surrounding the eyepiece opening molded on the outside of the faceblank. It shall have a C11 nosecup made of soft rubber with a pocket, molded on the inside to hold a microphone; an insulated cable having a male electrical connector at each end to connect the microphone with the communications equipment in the APH-5 protective helmet, and a C15 head harness consisting of three lengths of elastic webbing attached to the buckles in the faceblank (buckles will allow for adjustment of mask). An aluminum ferrule shall be installed in the inlet valve to provide a means for attaching one end of the M8 hose. This mask shall be made in three sizes.

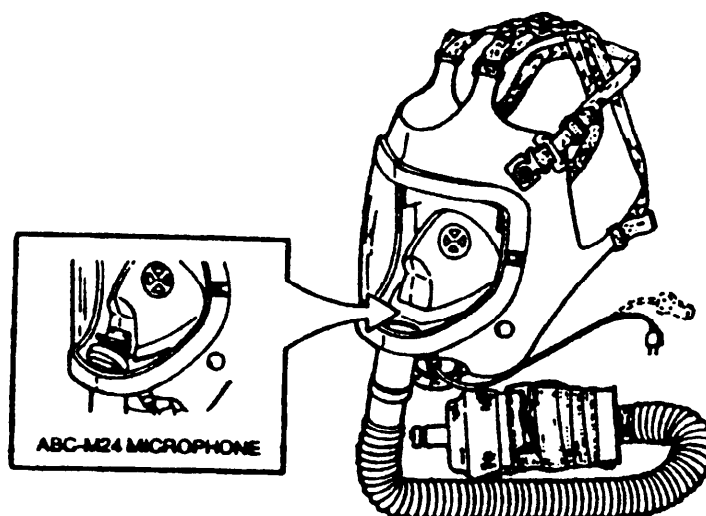


FIGURE 10. Typical illustration of Mask, Chemical Biological, Aircraft, ABC-M24.

5.11.2.1 M8 Hose group. The M8 hose shall connect the facepiece to an M10A1 canister. The hose shall be approximately two feet long and made of corrugated rubber reinforced with steel wire and covered with fabric. A rubber socket on one end of the hose shall fit over the nozzle of the canister's rubber socket at the other end shall be attached to the facepiece.

5.11.2.2 Canister group. The canister shall be an M10A1 canister with an inlet at the bottom and an outlet at the top. The M9 canister harness shall consist of a cotton duck band which will encircle the canister, and two adjustable straps which may be used as shoulder straps when the mask is to be without the carrier.

5.11.2.3 Carrier, Aircraft, Protective Mask, M17. The M17 carrier shall be made of mildew-proof, water-repellant cotton duck. It shall be equipped with a snapdown closing flap and an opening for the connector of the canister coupling at the back. Two adjustable straps will be attached to the outside and two short lengths of webbing with snap fasteners on the inside to hold the canister in

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place. The carrier shall also be provided with two loops for the anti-fogging kit M1 and two pockets.

5.11.2.4 Adapter kit, CBR mask, oxygen supply, aircraft M8. This kit is designed to be used by Mohawk aircraft personnel. It shall consist of a metal elbow coupling with a Y-extension which connects the mask to an oxygen bailout bottle. One end of the elbow coupling shall be a male connector that fits into a socket in the oxygen supply system; the other end shall be designed to receive the M1 coupling canister connector.

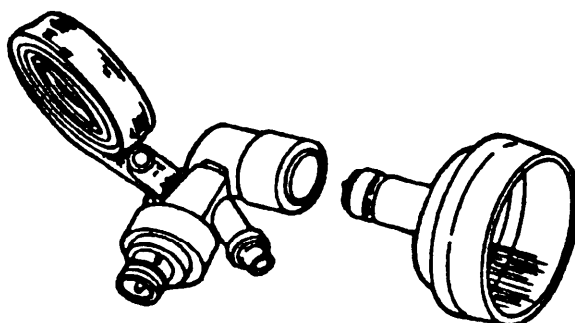


FIGURE 11. Typical illustration of Adapter Kit,
CBR Mask, Oxygen Supply, Aircraft M8.

5.11.3 Use data. The M24 aircraft chemical biological mask is intended for military use by aircraft pilots and crewmen to provide respiratory protection both in flight and on the ground. The microphone assembly in this mask permits the use of current radio communications equipment in army aircraft.

5.11.4 Packaging data. Each mask is fitted with a faceform, to prevent distortion of the facepiece, and assembled in the carrier. This assembly is placed in a water-vaporproof, heat-sealed bag such as polyethylene. Ten such masks are packed for shipment in a fiberboard box.

5.11.5 Safety precautions. The canister of the mask will not give protection against carbon monoxide or ammonia gas. Prevent water from entering the canister; water will destroy the effectiveness of the filter.

5.11.6 Storage data. Masks shall be stored in the boxes in which they are received and protected from sun, rain, and dampness. When stored under these conditions, the shelf life of the mask will be in excess of ten years.

5.12 Name. MASK, CBR, PROTECTIVE, TANK, M25A1

5.12.1 Specifications. MIL-M-51178, Mask, Protective, Tank, ABC-M25.

5.12.2 Technical description. The C14R3 faceblank-and-lens assembly shall be molded black rubber facepiece with a large flexible clear plastic lens cemented into the lens opening in the faceblank. An outlet valve stem, a cable stem, tabs for the head harness, and a flange surrounding the eyepiece opening shall be molded on the outside of the faceblank. The C11 nosecup shall be made of soft rubber with a pocket molded on the inside to hold an M116G dynamic microphone.

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An insulated cable shall be attached to the microphone with a female electrical connector at the other end. A C15 head harness consisting of elastic webbing shall be attached to the buckles in the faceblank; buckles will allow for adjustment of mask. An aluminum ferrule shall be installed in the inlet valve to provide a means for attaching one end of the M8 hose. This mask shall be made in three sizes.

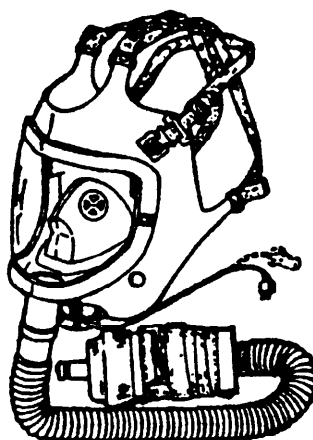


FIGURE 12. Typical illustration of Mask, CBR, Protective, Tank, M25A1.

5.12.2.1 M8 Hose group. The M8 hose shall connect the facepiece to an M10A1 canister. The hose shall be approximately two feet long and made of corrugated rubber reinforced with steel wire and covered with fabric. A rubber socket on one end of the hose shall fit over the nozzle of the canister's rubber socket at the other end shall be attached to the facepiece.

5.12.2.2 Canister group. The canister shall be an M10A1 canister with an inlet at the bottom and an outlet at the top. The M9 canister harness shall consist of a cotton duck band which will encircle the canister, and two adjustable straps which may be used as shoulder straps when the mask is to be without the carrier.

5.12.2.3 Carrier, CBR Mask, Tank, Field, Protective Mask, ABC-M13A1. The M13A1 carrier shall be made of mildew-proof, water-repellant cotton duck. It shall be equipped with a snapdown closing flap and an opening for the connector of the canister coupling at the back. It shall have two adjustable straps attached to the outside and two short lengths of webbing with snap fasteners on the inside to hold the canister in place. The carrier shall also be provided with three pockets.

5.12.3 Use data. The tank mask is intended for military use by the crews of tanks and certain combat vehicles to provide respiratory protection against CBR agents. The canister of the mask may be coupled to a gas-particulate unit mounted in a tank or combat vehicle that supplies air under pressure to the mask. The microphone assembly permits the wearer to communicate with other members through the communications system of the tank or combat vehicle.

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5.12.4 Packaging data. Each mask is fitted with a faceform, to prevent distortion of the facepiece, and assembled in the carrier. This assembly is placed in a water-vaporproof, heat-sealed bag such as polyethylene. Ten such masks are packed for shipment in a fiberboard box.

5.12.5 Safety precautions. The canister of the mask will not give protection against carbon monoxide or ammonia gas. Prevent water from entering the canister; water will destroy the effectiveness of the filter.

5.12.6 Storage data. Masks shall be stored in the boxes in which they are received and protected from sun, rain, and dampness. When stored under these conditions, the shelf life of the mask will be in excess of ten years.

5.13 Name. WINTERIZING KIT, PROTECTIVE MASK, M1

5.13.1 Specifications. MIL-W-51348, Winterizing Kit, Protective Mask, M1.

5.13.2 Technical description. The M1 winterization kit consists of a hood, insulating lenses, anti-snowglare lenses, a cheekpad, and a plastic bag containing four spare nosecup valve disks. The hood assembly covers the wearer's head and lower portion of the facepiece; the insulating lenses cover the lenses inside the facepiece; the anti-snowglare lenses are installed over the lenses of the mask; and the cheekpad insulates the wearer's face from the metal canister mounting. The components of the kit are in the hood which is folded for carrying to form a packet.



FIGURE 13. Typical illustration of Winterization Kit, Protective Mask, M1.

5.13.3 Use data. For military use the M1 Kit is used under conditions of extreme cold to protect the wearer of the M9A1 mask against frostbite, snowblindness, fogged lenses, and formation of ice around the outlet of the mask. The hood also protects against aerosol sprays.

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5.13.4 Packaging data. For military use each M1 Kit is packaged in an intermediate weather resistant fiberboard box. Seventy-two intermediate boxes are packaged in two layers of thirty-six each are packaged for shipment in a fiberboard box. Each container shall be marked, "Left Side" or "Right Side", whichever is applicable.

5.13.5 Safety precautions. Wash the hood when cleaning the mask on which it is used. If the hood is damaged, do not repair it.

5.13.6 Storage data. If stored in a dry area, the M1 Winterizing Kit will have an indefinite shelf life.

5.14 Name. WINTERIZATION KIT, FACEPIECE, PROTECTIVE MASK, TANK, M3

5.14.1 Specifications. MIL-W-51258, Winterization Kit, Chemical Biological Mask, Tank, M3.

5.14.2 Technical description. The M3 winterization kit shall consist of a clear plastic winterization eyelens outsert, an insulating jacket, and an M2 antiglare eyelens outsert. The clear plastic eyelens shall be mounted in a butyl-rubber-coated nylon frame. Two cords shall be provided for assembling the eyelens outserts to the mask. The insulation jacket shall consist of butyl-rubber-coated nylon and a layer of insulating material between nylon cloth. A slit in the jacket allows the microphone cable to be passed through. Nylon tape-fastening seals out cold air and holds the cable in place. Two cords shall be provided to hold the jacket in place on the mask. The M2 antiglare eyelens outserts made of tinted transparent plastic material shall fit over the entire eyelens area. Two snap fasteners shall be provided to attach antiglare outserts over the eyelens or over the winterization kit (See figure 14).

5.14.3 Use data. The M3 winterization kit is intended for military use with ABCA-M14A2, ABC-M24, and M25A1 masks to insure operation of the masks under extremely cold conditions.

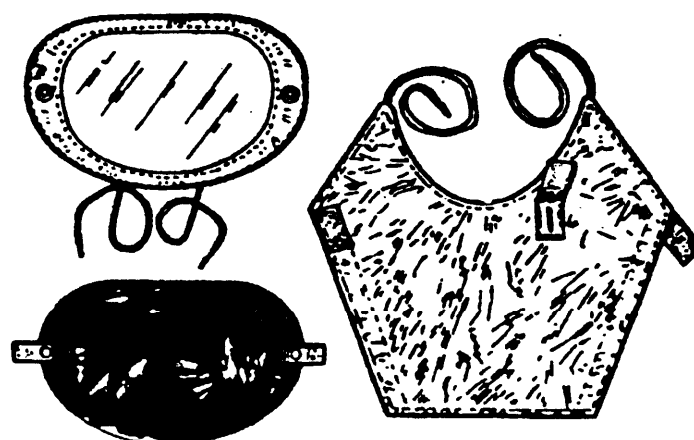


FIGURE 14. Typical illustration of Winterization Kit, Facepiece, Protective Mask, Tank, M3.

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5.14.4 Packaging data. Each M3 winterization kit is packaged in a heat-sealed, polyethylene bag. Ten kits are packed in an intermediate package; ten intermediate packages (100 kits) are packed for shipment in a fiberboard box.

5.14.5 Safety precautions. None.

5.14.6 Storage data. If stored in a dry area, the M3 winterization kit will have an indefinite shelf life.

5.15 Name. WINTERIZATION KIT, FACEPIECE, PROTECTIVE MASK, FIELD ABC-M4

5.15.1 Specifications. MIL-W-51255, Winterization Kit, Chemical Biological Mask, Field, M4.

5.15.2 Technical description. The M4 winterization kit shall consist of an ice particle prefilter and two packets of winterization components. The ice particle prefilter shall be made of cotton duck and knitted nylon fleece attached to form a pocket and cheek flaps. Two openings in the cotton duck material, two plastic retainers, and a length of cotton tape shall keep the prefilter in place on the mask. Each packet of winterization components shall contain two winterization inlet valve discs and two winterization nose cup valve discs; made of a special rubber compound to withstand the effects of extreme cold.

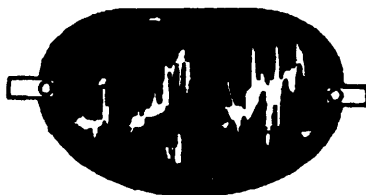


FIGURE 15. Typical illustration of Winterization Kit, Facepiece, Protective Mask, Field, ABC-M4.

5.15.3 Use data. The M4 winterization kit is intended to be used with the M17A1 mask to insure operation of the mask under extremely cold conditions.

5.15.4 Packaging data. Each M4 winterization kit is packaged in a heat-sealed polyethylene bag. Ten kits are packaged in an intermediate package; ten intermediate packages (100 kits) are packed for shipment in a fiberboard box.

5.15.5 Safety precautions. None.

5.15.6 Storage data. If stored in a dry area, the M4 winterization kit will have an indefinite shelf life.

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6. NOTES

6.1 Intended Use. Chemical Biological masks and hoods are intended for military use to protect the face, eyes, and respiratory tract of the wearer from field concentrations of chemical agents, biological organisms, and radioactive dust and vapors. Variations are described in "use data" paragraphs for each type of mask or hood.

6.2 Subject term (key word) listing.

Canister
Carrier
Face Piece
Hood
Mask, CBR
Mask, Gas
Mask, Protective
Safety Precautions
Winterization Kit (Winterizing Kit)

6.3 Abbreviations. The use of abbreviations in this military standard are in accordance with MIL-STD-12 where applicable. Metric system abbreviations and symbols are in accordance with ASTM E 380.

6.4 Changes from previous issue. Asterisks or vertical lines are not used in this revision to identify changes with respect to the previous issue due to the extensiveness of the changes.

6.5 International interest. Certain provisions of this standard are the subject of ABC international standardization agreement. When amendment, revision, or cancellation of this standard is proposed, the departmental custodians will inform their respective Departmental Standardizational Office so that the appropriate action may be taken respecting the international agreement concerned.

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