MIL-STD-450B
22 October 1968
SUPERSEDING
MIL-STD-450A
4 June 1962

MILITARY STANDARD

SIGNS FOR CONTAMINATED

OR DANGEROUS AREAS

FSC MISC

DEPARTMENT OF DEFENSE
Washington, D.C. 20301

Signs for Contaminated or Dangerous Areas

MIL-STD-450B

1. This Military Standard is mandatory for use by all Departments and Agencies of The Department of Defense.

2. Recommended corrections, additions, or deletions should be addressed to the International Standardization Office, Office of the Assistant Chief of Staff for Force Development, Headquarters, Department of the Army, Washington, D.C. 20310.

FOREWORD

Areas and facilities contaminated by biological, chemical, or radiological materials; or by mines, boobytraps, bombs, or other unexploded objects may endanger the health or safety of military forces and civilian population alike. Consequently standard warning signs and symbols, universally understood, are necessary to preserve life and property.

The United States (through the Department of Defense) has ratified NATO & CENTO STANAG 2002, ABCA SOLOG4, and SEATO SEASTAG 2002 concerning the marking of contaminated or dangerous land areas. These agreements cover the signs included herein.

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1. SCOPE

1.1 Purpose. This standard implements the treaties and agreements cited in the foreword, and is the design standard for the signs and symbols covered. It covers only signs intended for posting around contaminated or dangerous areas.

1.2 Application. Signs will be placed above the ground, right-angled apex downwards, on wire boundary fences, trees, rocks, poles, or by putting the apex into the ground. This last method should not be used if any of the other methods can be adopted, as the signs may readily be knocked down, and may well be obscured by grass or other undergrowth. The front surface of the sign will face away from the contaminated or dangerous area. Areas which contain more than one type of contamination will be marked with the relevant signs placed near each other. Because of the small size of these signs, visibility against the background must be considered.

1.3 Classification. This standard covers the following military signs:

(a) Radiological contamination.
(b) Biological contamination.
(c) Chemical contamination.
(d) Minefields (or barriers) other than chemical.
(e) Chemical minefields (or barriers).
(f) Boobytrapped areas.
(g) Unexploded bombs.

2. REFERENCED DOCUMENTS

2.1 The issue of the following documents in effect on date of invitation for bids form a part of this standard to the extent specified herein:

SPECIFICATIONS

Military

MIL-L-81352 - Lacquer, Acrylic (For Naval Weapons Systems).

STANDARDS

Federal

FED. STD. No. 595 - Colors.

3. DEFINITIONS

3.1 Martial contamination. Radiological, biological, and chemical contamination, minefields (or barriers) other than chemical, chemical minefields (or barriers), boobytrapped areas, and unexploded bombs. These dangers will always be marked by triangular signs unless the area is to be abandoned to the enemy (STANAG 2002).

3.2 Military radiological contaminated area. An area which has been intentionally or accidentally contaminated with radiological material by the functioning of a nuclear weapon, or the spreading of radiological material in such a manner that a serious threat to safety is created.

3.3 Radiation. Alpha particles, beta particles, gamma rays, X-rays, neutrons, high-speed electrons, high-speed protons, and other types of radiation. Excludes: Sound waves, radio waves, visible, infrared, or ultraviolet light.

4. GENERAL REQUIREMENTS

4.1 Size and shape. Military signs shall be 90° by 45° by 45° isosceles right triangles, not less than 20 centimeter or 8 inches on both short sides in accordance with figure 1. If the signs are to be hung on wire, and if they are made of a thin metal (such as thin sheet aluminum), two ears should be provided on the hypotenuse to bend over and around the wire. Otherwise, two 1/4-inch holes should be punched or drilled near the 45° angles. Both ears and holes may be provided. Sizes are minimum and are those intended for signs for field issue. Nothing in this standard is to prevent the preparation of larger signs where desired, provided that they otherwise conform to the requirements of this standard.

4.2 Lettering. Lettering shall be gothic lettering. Stroke width shall be approximately one-fifth the height of the lettering. Upper case letters only shall be used. Broken (stencil type) lettering may not be used.

4.3 Information on signs. Whenever possible the following information will be written on each appropriate type of sign:

(a) Biological and chemical agents:

1. Name of agent (if known).
2. Date and time of detection.

(b) Radiological contamination:

1. The dose rate.
2. Date and time of reading.
3. Date and time of detonation that produced the contamination (if known).

4.4 Colors. Fluorescent colors should be used whenever available. Colors shall be:

COLOR	FED. STD. No. 595
Red	11105 or 11136
Yellow	13538 or 13655
Blue	15102
White	17875
Black	17038

4.5 Material. Material shall be as specified. Sheet aluminum 0.020 inch thickness has been found most satisfactory for these signs, but metal, wood, plastic, composition board, or any similar material may be used. The signs shall be overcoated with an acrylic lacquer conforming to MIL-L-81352.

5. DETAILED REQUIREMENTS

5.1 Radiological contamination signs shall be white with "ATOM" in black two-inch letters (see figure 2).

5.2 Biological contamination signs shall be bright blue, with "BIO" in red two-inch block letters (see figure 3).

5.3 Chemical contamination signs shall be yellow with "GAS" in red two-inch block letters (see figure 4).

5.4 Minefield signs shall be red with "MINES" in white 1-1/2-inch block letters (see figure 5).

5.5 Chemical minefield signs shall be red with "GAS MINES" in yellow 1-inch block letters and with a 1-inch wide yellow horizontal stripe below the lettering (see figure 6).

5.6 Boobytrapped areas signs shall be red with a 1-3/4-inch horizontal white stripe across the center (see figure 7).

5.7 Unexploded object signs shall be red with a white conventionalized drop bomb vertically in the center (see figure 8). The bomb symbol should be not less than 4-inches long.

6. NOTICES

6.1 International interest. Certain provisions of this standard are subject to international standardization agreements NATO AND CENTO STANAG's 2002, ABCA SOLOG 4, and SEATO SEASTAG 2002. When change, revision, or cancellation of this standard is proposed which will affect or violate the international agreement concerned, the preparing activity will take appropriate reconciliation action through international standardization channels including departmental standardization offices, if required.

Custodians:

Army - ME
Navy - OS
Air Force - 82

Reviewer interest:

Army - MU, MD, MI
Navy - MC
NSA

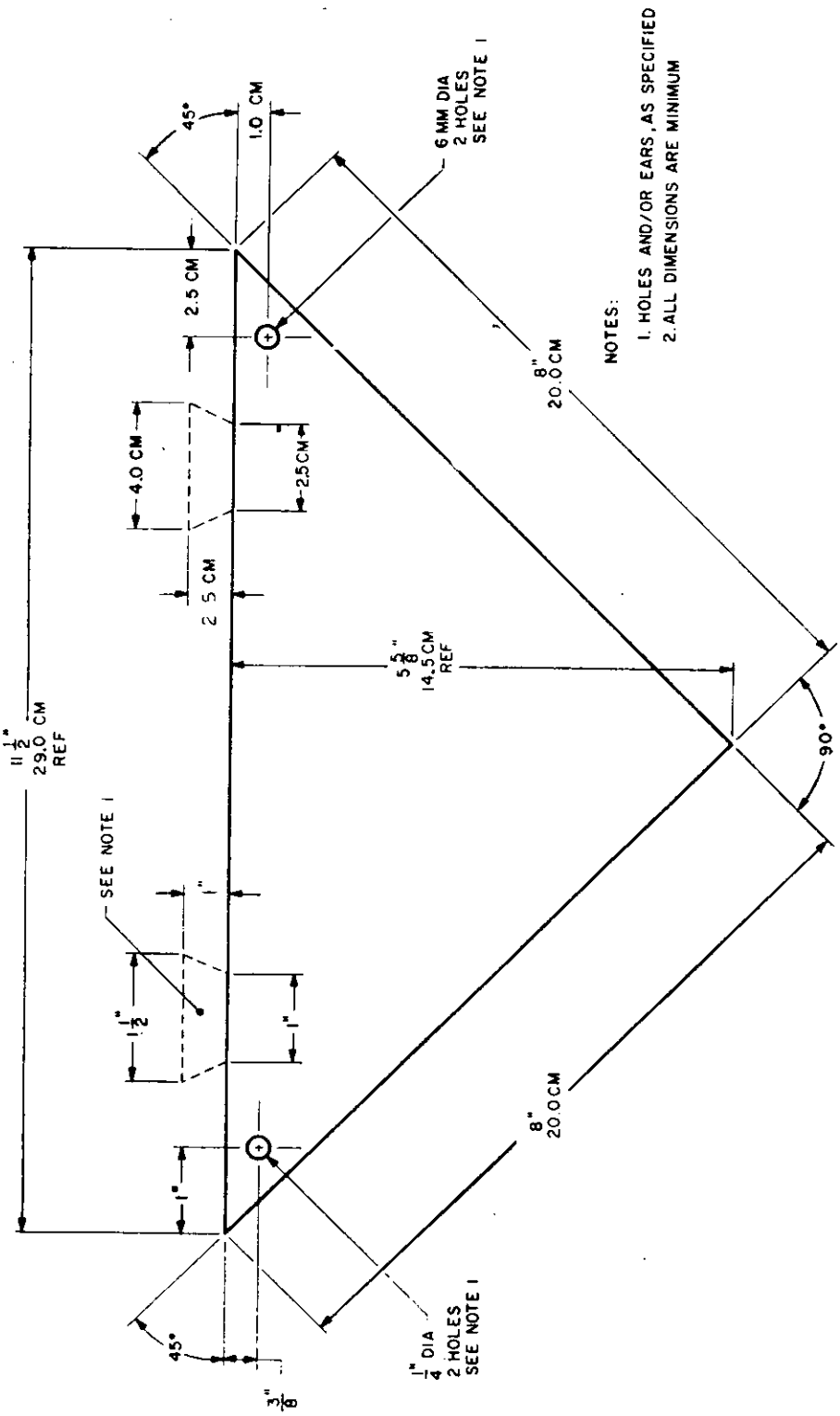
User interest:

Army - CE, GL
Navy - YD

Preparing activity:

Army - ME

Project No. MISC-0420



DX-1151A

FIGURE 1.
DIMENSIONS

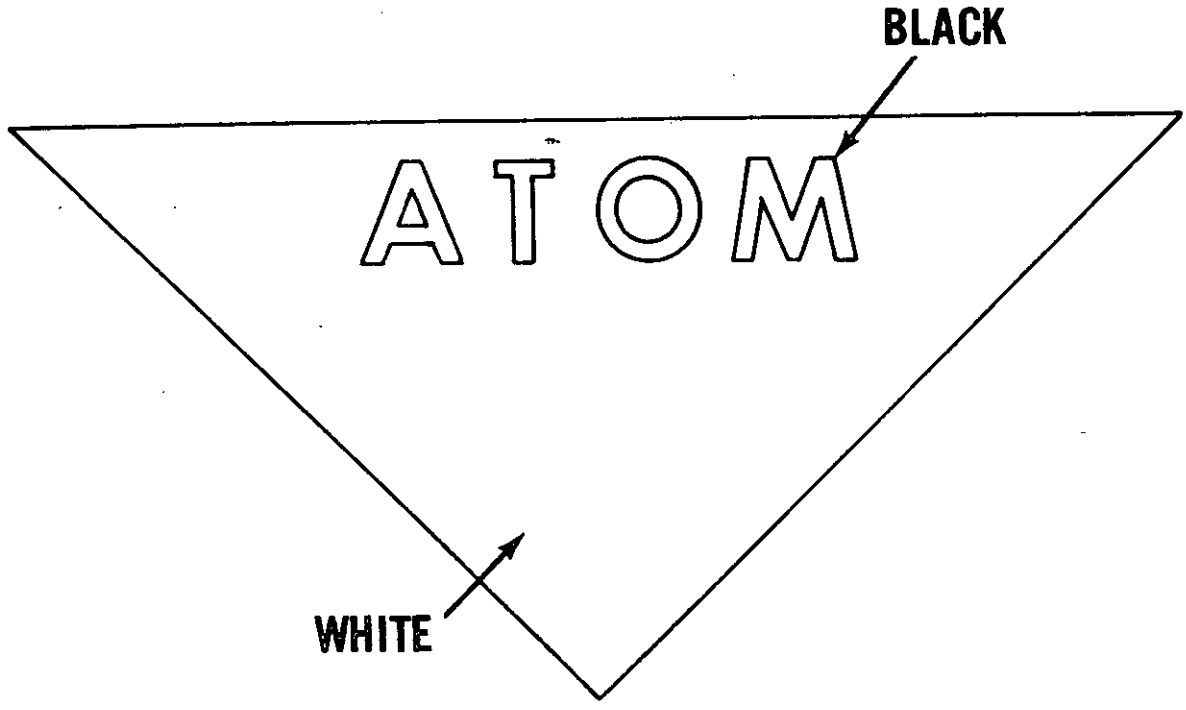


FIGURE 2. RADIOLOGICAL CONTAMINATION SIGN

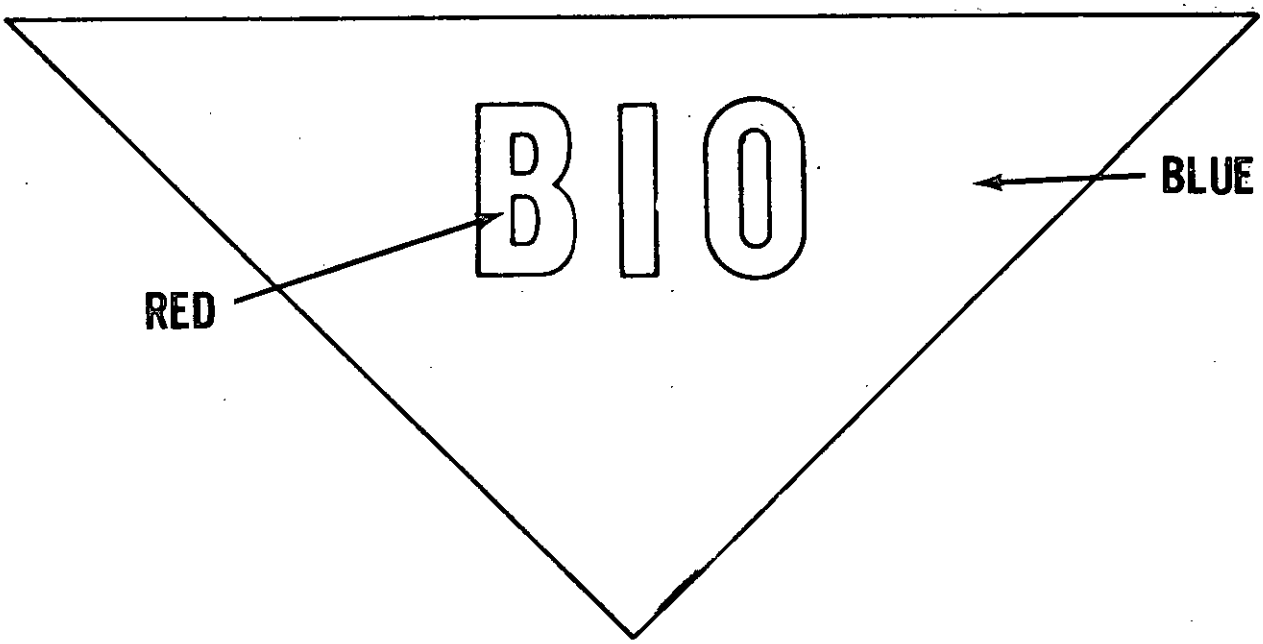


FIGURE 3. BIOLOGICAL CONTAMINATION SIGN

A-1736

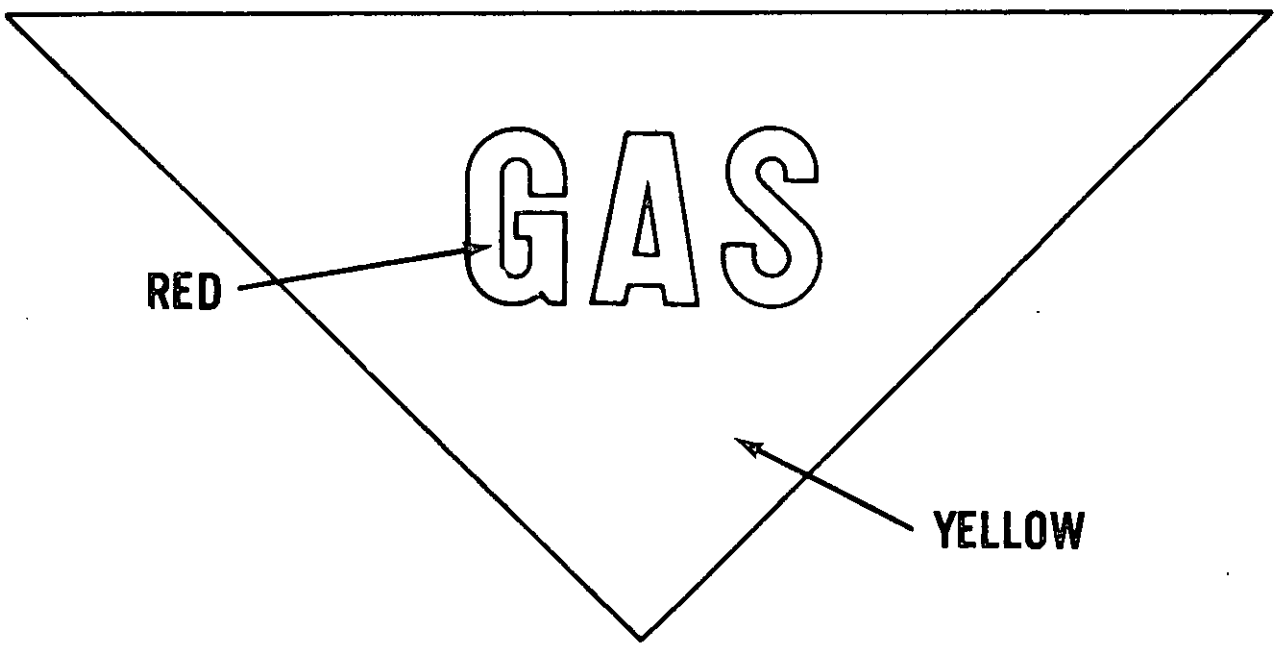


FIGURE 4. CHEMICAL CONTAMINATION SIGN

X-1737

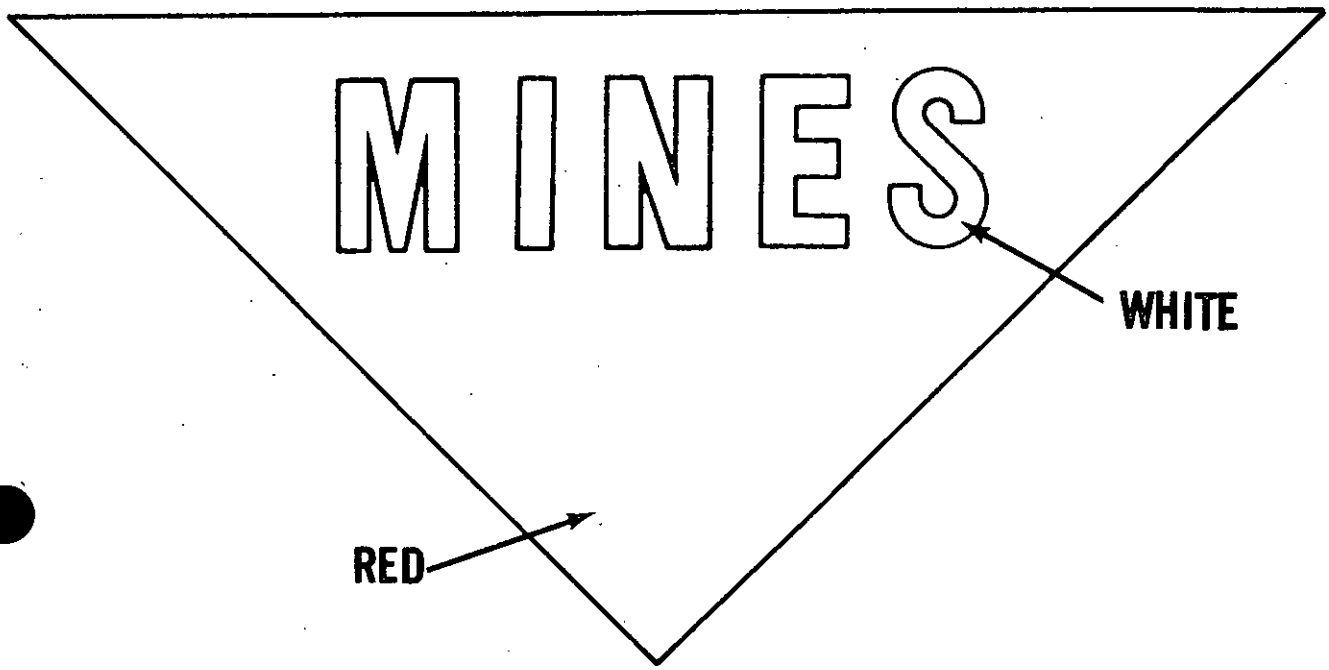


FIGURE 5. MINEFIELD WARNING SIGN

X-1738

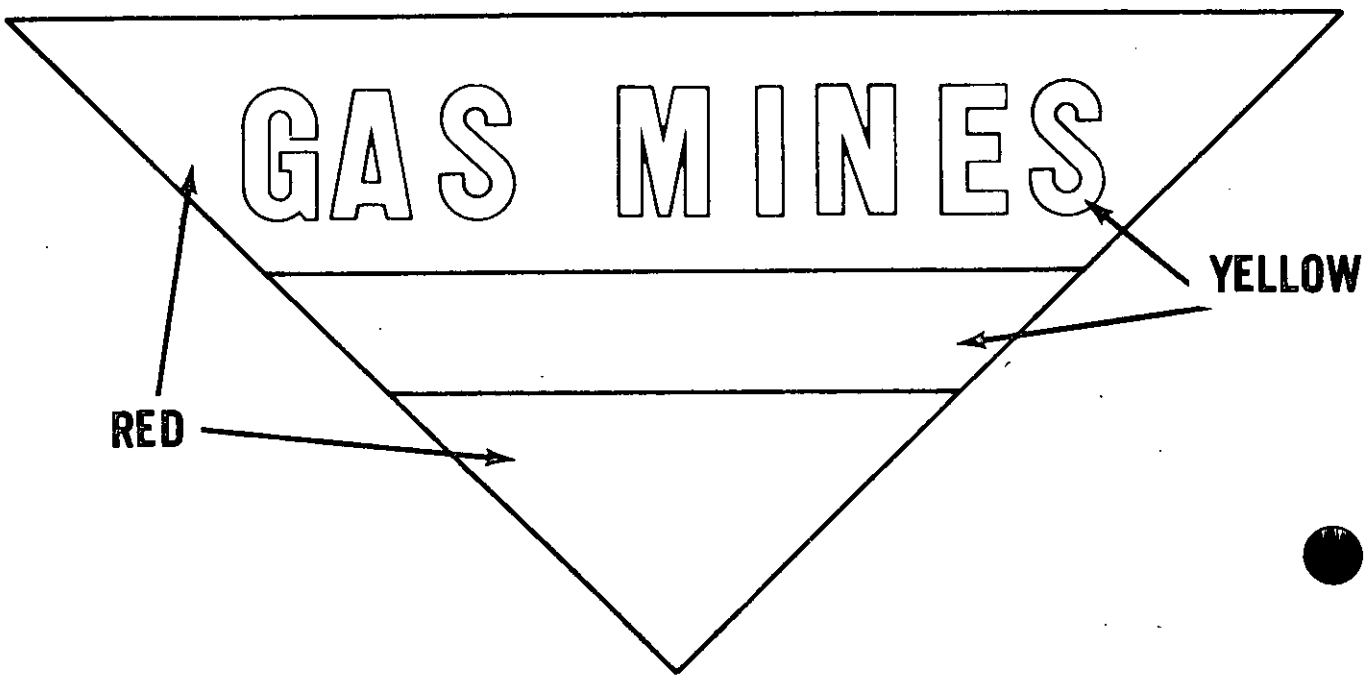


FIGURE 6. CHEMICAL MINEFIELD WARNING SIGN

X-17

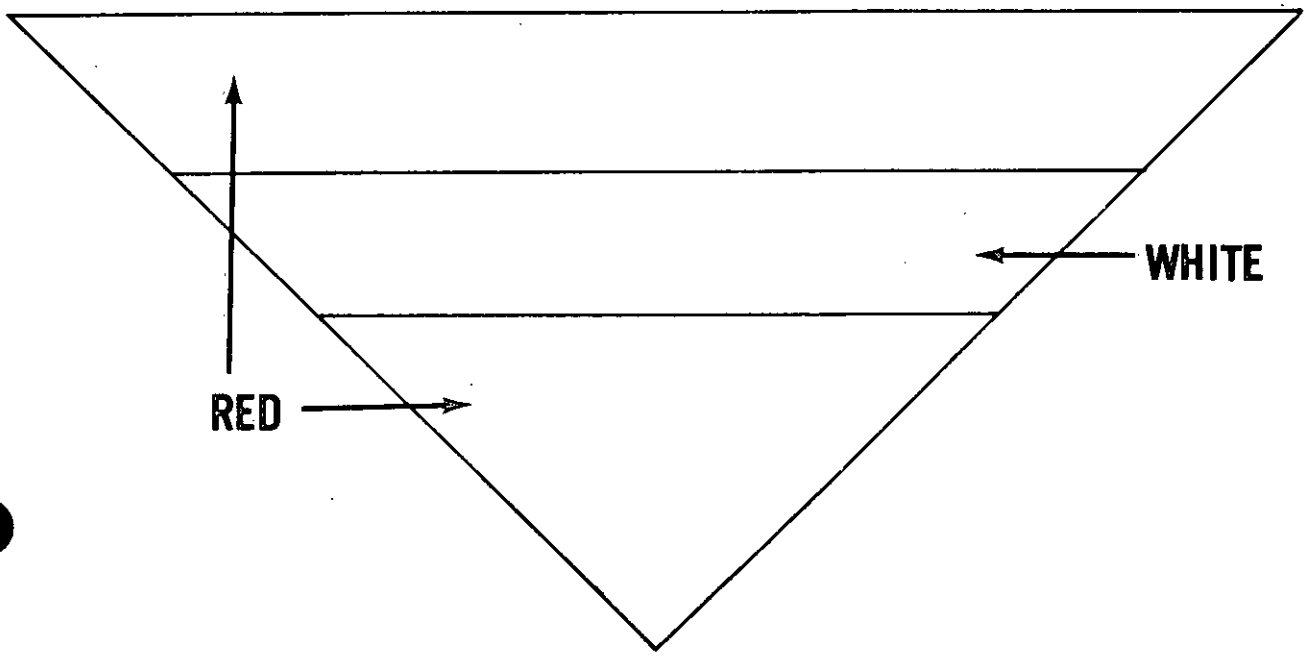


FIGURE 7. BOOBYTRAPPED AREA WARNING SIGN

X-174C

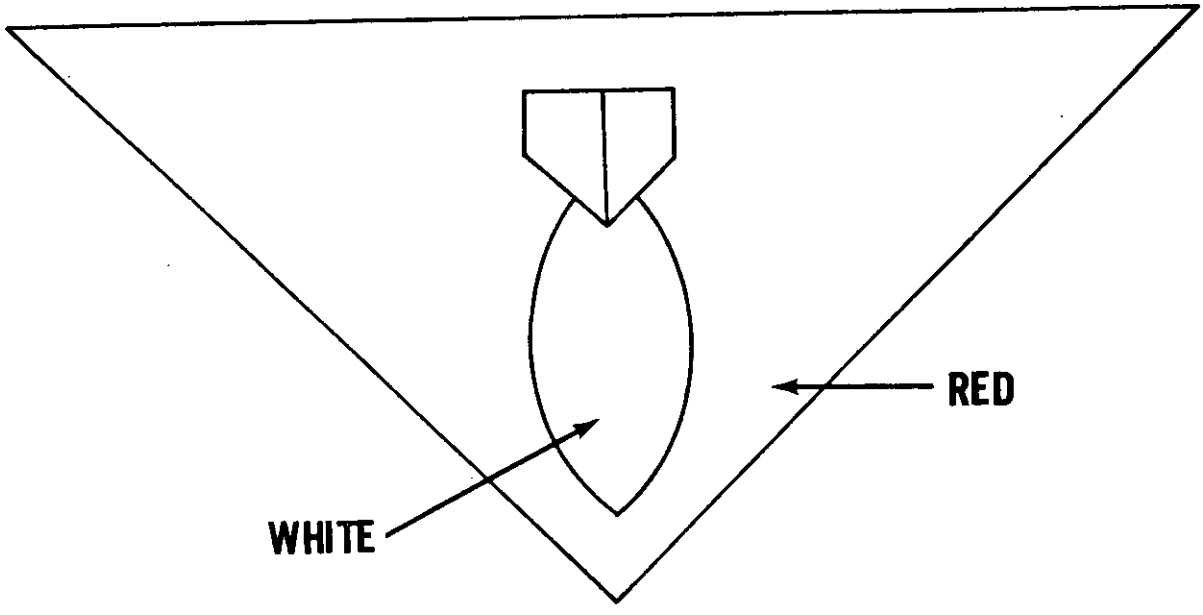


FIGURE 8. UNEXPLODED OBJECT WARNING SIGN