

DEPARTMENT OF THE ARMY TECHNICAL BULLETIN

GRENADE, HAND, TEAR, CS, M7A2

Refs: FM 23-30, TM 3-250

Headquarters, Department of the Army, Washington 25, D.C.
31 October 1961

SAFETY PRECAUTIONS

Wear field protective masks when using the M7A2 CS tear hand grenade.

Do not use the pull ring to lift or to handle the grenade.

Do not strike the top of the fuze with a hard object. A blow may ignite the fuze.

Hold the safety lever firmly against the body of the grenade until the grenade is thrown.

If the safety lever of the grenade is released accidentally while the grenade is being held, throw the grenade immediately.

Do not attempt to launch a grenade from a rifle with service or blank ammunition. Follow the procedure given in paragraph 5.

See FM 23-30 for additional safety precautions to be observed when throwing or launching grenades.

1. **Scope.** This bulletin contains a description of the M7A2 CS tear hand grenade and directions for its use, shipment, and storage.

2. **Use.** The M7A2 CS tear hand grenade is a special-purpose burning-type munition to be used in the control of riots. CS is an irritant which affects the eyes, nose, and throat. The agent also irritates the skin.

3. **Description.** The M7A2 CS tear hand grenade (fig. 1) is a cylindrical container filled with approximately 9½ ounces of fuel-agent mixture. The agent is dispersed through four holes in the container by the pressure built up when the fuel burns.

a. The body of the grenade is a thin sheet-metal cylinder, approximately 2¼ inches in diameter and 4½ inches high. A fuze is screwed into an adapter in the top of the grenade. There are three agent-emission holes in the top of the grenade and one in the bottom. These holes are covered with pressure-sensitive tape to protect the filling from moisture.

b. The grenade filling consists of 150 grams of burning mixture (fuel) and approximately 115

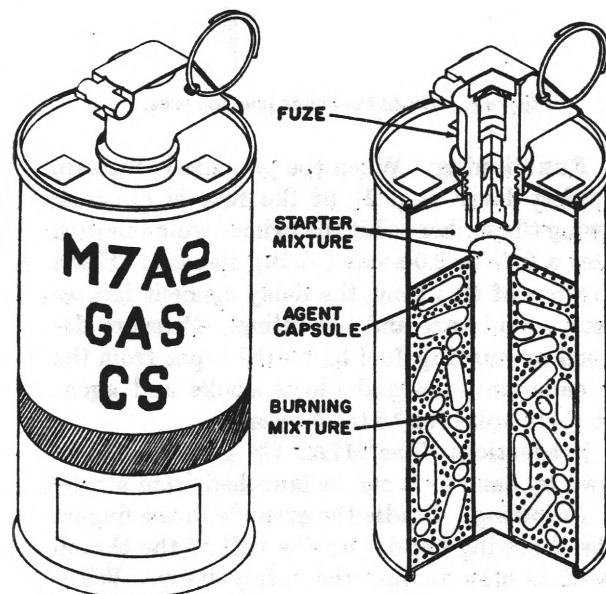


Figure 1. M7A2 CS tear hand grenade.

grams of encapsulated agent (97 grams of powdered CS agent in gelatin capsules). The filling is compressed into the grenade body in such man-

ner as to leave a tapered channel through the filling, as shown in figure 1. The bottom of this channel coincides with the emission hole in the bottom of the grenade body. The top surface of the filling and the tapered walls of the hole are coated with starter mixture to insure ignition of the fuel by the fuze.

c. An M201A1 grenade igniting fuze (fig. 2) is screwed into the adapter in the top of the grenade body. In this position, the ignition mixture of the fuze is centered over the hole through the middle of the grenade and just slightly above the starter mixture coating of the top surface of the filling.

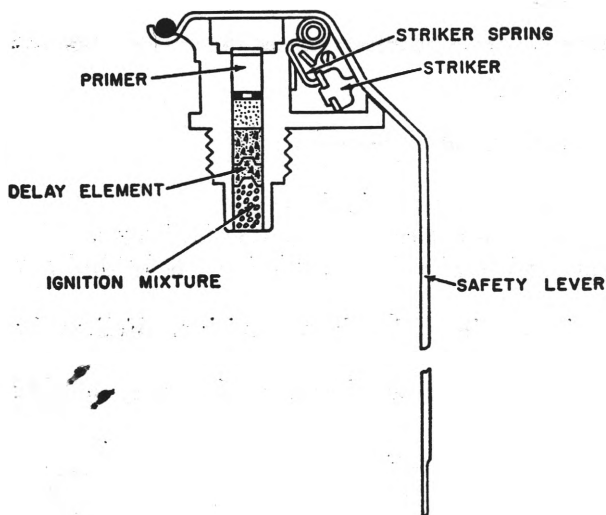


Figure 2. M201A1 grenade igniting fuze.

4. Functioning. When the grenade is thrown, the safety lever (fig. 2) of the fuze is released, allowing the striker to hit the primer which in turn ignites a 0.7- to 2.0-second delay element. Upon expiration of this time, the delay element ignites the starter mixture and the filling. Pressure developed by burning fuel blows the tapes from the four emission holes and blows smoke and agent from these holes for 15 to 35 seconds.

5. Projection. The M7A2 CS grenade can be thrown by hand or it can be launched from a rifle.

a. *Throwing.* Cradle the grenade in the fingers of the throwing hand with the ball of the thumb pressed tightly against the safety lever. Withdraw the safety pin by pulling the pull ring with the free hand, and throw the grenade. (See FM 23-30 for additional instructions for throwing the

grenade.) The fuze functions in the manner described in paragraph 4 when the safety lever is released.

b. *Launching.* The grenade can be launched from an M1 rifle by using the M2A1 grenade projection adapter and an M3 caliber .30 rifle grenade cartridge (FM 23-30).

6. Marking and Packing. a. The body of the M7A2 CS grenade is painted gray, and all markings are red. One band completely encircles the grenade. The grenade is stencilled as shown in figure 1: Nomenclature appears above the band and manufacturer's name and lot number below.

b. The M7A2 CS grenade is packaged in a sealed fiberboard container. Sixteen containers are packed in a wood box which weighs 34 pounds when filled and displaces 0.8 cubic foot. A red stripe on a gray background is painted on one end of the box.

7. Shipment. Interstate Commerce Commission (ICC) regulations and Army regulations of the 55-series govern the shipment of chemical munitions within the continental United States. Oversea shipments should be made in compliance with pertinent Army regulations of the 55-series. Information about the shipment and transportation of chemical munitions is given in TM 3-250.

8. Storage. The M7A2 CS grenade is classified for storage purposes as a group D chemical munition. See TM 3-250 for detailed information on storing chemical munitions.

9. Demolition To Prevent Enemy Use. a. When supplies of M7A2 CS grenades are in danger of being captured by an enemy, authority to demolish them must be obtained from the responsible commander.

b. Demolish the grenades by burning them in a pit or defiladed location. To prevent the creation of an agent cloud during such burning, pile the grenades with large quantities of dunnage so that a hot and prolonged fire will be produced, sufficient to decompose the agent or carry it into the upper atmosphere. Pour gasoline over the pile and ignite it from a safe distance.

c. When possible, observe the following precautions:

- (1) Make sure that the fire is downwind of friendly forces.
- (2) Limit the number of grenades burned at any one time.

BY ORDER OF THE SECRETARY OF THE ARMY:

G. H. DECKER,
General, United States Army,
Chief of Staff.

Official:

J. C. LAMBERT,
Major General, United States Army,
The Adjutant General.

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NG: State AG (3); units—same as Active Army except allowance is one copy to each unit.

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For explanation of abbreviations used, see AR 320-50.