

## FOAM TYPE FIRE EXTINGUISHERS

### 1. GENERAL

1.01 The foam type fire extinguisher is one of the approved types to be used on fires in locations which involve flammable liquids such as oil and gasoline (except alcohol). It is not suitable for use on fires involving live electrical equipment such as power boards, power plant apparatus or elevator machinery.

1.02 This section is reissued principally to include precautions against possible damage to extinguishers and disposition of those found in damaged condition.

### 2. DESCRIPTION

2.01 The extinguisher consists of a lead lined copper tank of about 2-1/2 gallons capacity, using water mixed with sodium bicarbonate and a foam producing agent and an inner container holding a solution of aluminum sulphate. The liquid is expelled by inverting the tank, causing the aluminum sulphate to be mixed with the sodium bicarbonate solution resulting in a chemical action producing foam and generating a pressure which forces the liquid out of the hose with sufficient force to throw an effective stream some 30 feet. This

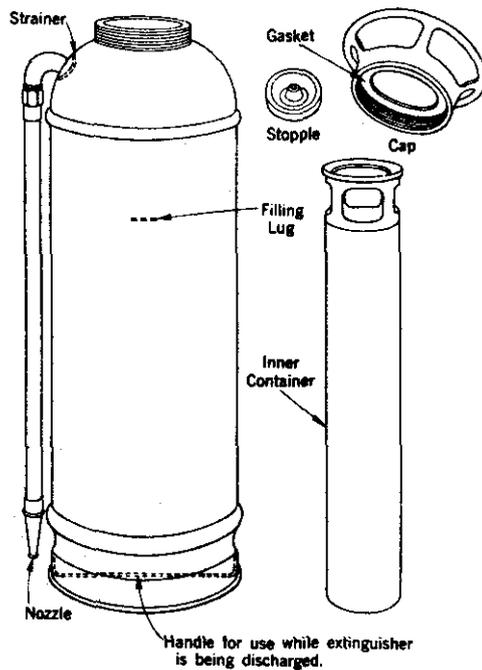


Fig. 1.

discharge commences almost immediately after the tank is inverted and continues for about 50 seconds until all the liquid is gone. The discharge of foam slows up when the extinguisher is turned right side up, but a certain amount continues to escape and cannot be stopped until the chemical action has been completed. The extinguisher must be recharged before it can be used again. The details of a typical extinguisher are shown by Fig. 1.

### 3. LOCATION

3.01 Foam extinguishers are subject to freezing and their action becomes sluggish at temperatures of 40°F. or lower and, therefore, should not be located in spaces where the temperature may be lower than this figure.

3.02 Extinguishers should not be located where they are subject to mechanical injury from moving objects.

### 4. MOUNTING

4.01 Extinguishers should be mounted as shown by Fig. 2.

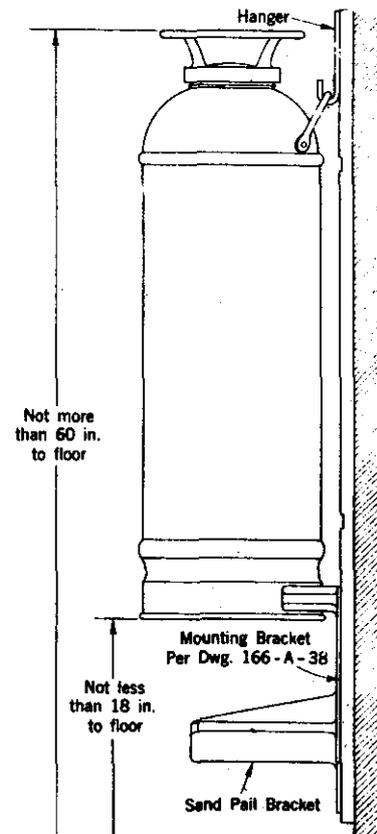


Fig. 2.

SECTION H43.130

4.02 Where extinguishers are placed on free standing columns, arrangements for mounting may include metal bands encircling the column or if it has been predetermined in what locations they will be required, consideration should be given to including mounting arrangements when the columns are constructed.

4.03 If it is unnecessary to mount a sand pail with the extinguisher, it can be mounted as shown in the section covering water type extinguishers.



to weaken these seams, and extinguishers so damaged should be discarded at once.

- (5) Finish is in good condition.
- (6) Mounting bracket is securely fastened to wall.
- (7) Record tag is attached and extinguisher has been recharged within the required time.

5. METHOD OF OPERATION

5.01 To operate the extinguisher, proceed as follows:

- (1) Remove extinguisher from mounting bracket and carry to fire in upright position.
- (2) Hold hose and extinguisher cap handle in one hand, directing the nozzle at the fire, and invert tank holding it by the handle in the bottom with other hand.
- (3) Direct discharge at fire from a distance such that the foam will fall lightly on the burning surface. Fighting fire from too close a distance may cause burning liquid to splash and spread fire. If fire is in a container, the discharge should be played on the inside wall.
- (4) If possible, walk around fire as foam is played on it.
- (5) Reduce liquid discharge by inverting tank to normal position when fire is completely extinguished.
- (6) Do not use foam type extinguishers on fires involving live electrical equipment such as power boards, power plant apparatus or elevator machinery.
- (7) Do not return discharged or partially discharged extinguishers to their mounting brackets.

(B) Recharging

6.02 Extinguishers should be discharged (or emptied) and refilled at least once a year to make sure they are in proper condition for immediate use. An inspection of the items mentioned in Paragraph 6.01 should also be made at this time.

Method

6.03 Remove the extinguisher from its mounting bracket and if it is to be discharged, carry it to a suitable location, preferably outside the building, for this purpose. Leaking gaskets, defective hose connections, or other irregularities should be noted as the extinguisher is discharged. Only one extinguisher per floor should be taken out of service at one time.

6.04 Take extinguisher to a location where a new charge can be provided and where the tank can be refilled. Unscrew the cap and remove the inner container from the tank.

6.05 Where it is not desirable to discharge the extinguisher, it may be emptied instead. When this is done, both the tank and the inner container should be completely drained, care being exercised in doing this not to mix the aluminum sulphate and soda solution. If emptied into a slop sink, the soda solution should be poured into the sink first and thoroughly flushed down with water. The aluminum sulphate should then be emptied into the sink and flushed down with water.

6.06 The tank should be examined on the inside for corrosion and for deposits of soda or other foreign material which should be scraped off with a suitable piece of wood. The tank should then be scrubbed with a stiff brush and rinsed thoroughly. The strainer should be cleaned and the nozzle and hose should be examined and flushed out to insure that the discharge passage is open. The cap, inner container and stopple should be scrubbed with a brush and carefully rinsed.

6.07 The extinguisher should then be recharged by carefully following the directions on the recharge packages usually furnished for this purpose. This generally involves thoroughly mixing the "B" solution containing bicarbonate of soda and a foam producing agent

6. MAINTENANCE

(A) Inspection

6.01 Foam type extinguishers should be inspected at intervals for the following items:

- (1) Hose is in good condition.
- (2) Nozzle opening is unobstructed.
- (3) Hose coupling is tight at tank outlet.
- (4) Dents are not evident on the extinguisher body at or near the upper or lower horizontal seams. Such dents tend



