



## **Fire Industry Association**

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# Environmental Guidance - Foam Fire Extinguishers

## 1. Introduction

This Fact File is intended to give guidance on the environmental issues relating to fire fighting foam with particular reference to fire extinguishers. It covers the applicable legislation, how to handle the extinguishers/foam at the customer's site, and looks at the available options for collection and disposal.

## 2. Environmental issues.

The Groundwater Regulations are designed to prevent certain dangerous substances from causing direct or indirect pollution to groundwater (used as a source of drinking water).

Fire fighting foams cannot be discharged to groundwater and need to be disposed of safely via foul sewer to a waste water (sewage) treatment plant, or by incineration.

**Foam extinguisher concentrates, and extinguisher foam charges must NOT be discharged onto car parks, hard standings, grass, waste land, streams, rainwater/storm drains or any other outdoor site.**

## 3. Extinguishers on site

### 3.1. Minimising the risk

When installing and recommending fire extinguishers on site to meet a risk assessment, care should be taken to install the correct extinguisher for the correct risk.

If there is sufficient class B risk then foam extinguishers should be recommended and installed. If the risk is predominantly class A then an alternative water based extinguisher or ABC powder may be more appropriate.

### 3.2. Annual Service

During the Annual Service the recommendations in the FIA Guide to servicing and/or the manufacturer's instructions should be followed. When the extinguisher is emptied, the foam solution contents (media) should be stored in an appropriate container before returning to the extinguisher. If the media requires replacing the discarded media should be kept in a container until all the extinguishers have been serviced. If at the end of the service only a few extinguishers (1-5) have been emptied then it should be possible to dispose of the collected media down the foul water sewage system (i.e. toilet) where it cannot enter ground water. The media should **never** be discarded anywhere on site other than the foul water system. Alternatively if the collected media is from more than 5 extinguishers it should be collected for disposal by the methods described in sections 4 & 5 below.

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### 3.3. Discharge testing

Discharge testing is now a contentious issue, the run off from the extinguisher cannot enter the groundwater system. Therefore previous practice of carrying out the discharge on the customer's site in areas where it could reach the ground water (e.g. car parks, grass, bare soil, rainwater drains or wasteland) is not permitted and could result in legal proceedings by the Environment Agency.

It could be possible to discharge small numbers of extinguisher in to the foul water system as described above but the practicality of discharging extinguishers down toilets needs to be considered, discharging a foam extinguisher on the top floor of multi-storey building should be avoided.

FETA are holding discussions with all interested parties (BSI, EA, CFOA, other trade associations) to find a solution to this problem. This will include a review of the requirement for discharge testing in BS 5306-3.

## 4. Extinguishers off site/at service depot

### 4.1. Collection

There are a number of options available for the collection of foam for disposal and the practicality of each should be considered before agreeing a procedure for collecting and disposing of foam.

- Collecting the foam in a secure container in the technician's vehicle before transferring to a larger container at the service depot,
- Keeping the media in the extinguisher and replacing the old extinguisher with a new extinguisher. The extinguishers are returned to the service depot and emptied into a secure container for storage,
- Keeping the media in the extinguisher and replacing the old extinguisher with a new extinguisher. The old extinguishers are then collected from the customer's site by licensed waste disposal company.

### 4.2. Storage

Measures should be taken to ensure that any stored media cannot leak and reach groundwater.

The media should be stored in sealed containers.

## 5. Disposal of foam

### 5.1. Foul water sewage system

It is currently permitted to dispose of foams (except PFOS based) via the foul water sewage system

### 5.2. High temp incineration

PFOS foams must be disposed of via high temperature incineration.

## 6. Applicable Regulations

Detailed information on the regulations that apply to foam fire extinguishers are given in Fact File 20, however below is a list of the regulations that you will need to comply with:

- **The Groundwater Regulations 1998**
- **Water Resources Act 1991**
- **Water Industries Act 1991**
- **Environmental Protection (Duty of Care) Regulations 1991**
- **Control of pollution (Amendment) Act 1989/ Controlled waste (registration of carriers & seizure of vehicles) Regulations 1991**

## 7. Sources of Further information

The following websites provide more information on environmental issues and legislation.

- Environment Agency  
<http://www.environment-agency.gov.uk/>
- Environment Agency NetRegs  
<http://www.netregs.gov.uk/>
- Envirowise  
<http://www.envirowise.gov.uk/>

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