



Fire Industry Association

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Environmental Guidance – Fire Fighting Powder and Powder Fire Extinguishers

1. Introduction

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

2. Types of fire extinguishing powder

The main types of powder in use are:

- **ABC**
 - Monoammonium Phosphate
 - Monoammonium Phosphate plus Ammonium Sulphate
- **BC**
 - Sodium Bicarbonate (e.g. "Standard BC")
 - Potassium Bicarbonate (e.g. "Purple K")
 - Potassium Allophonate plus Potassium Bicarbonate (e.g. "Monnex")
 - Potassium Sulphate (e.g. "Super K")
 - Potassium Chloride
- **D**
 - Sodium Chloride
 - Potassium Chloride
 - Graphite

3. Applicable Regulations

Detailed information on the regulations that apply to powder fire extinguishers are given in FETA Fact File 20/BFPSA Fact File 17, however below is a list of the regulations that you will need to comply with:

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

Detailed information on the regulations applicable can be found on the Environment Agency NetRegs website (section 6).

Note: The legislation referred to above applies to England and Wales, different legislation applies in Scotland more information can be found on the Scottish Executive website (www.Scotland.gov.uk) or the Scottish Environment Agency website (<http://www.sepa.org.uk>).

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4. Handling of Extinguishers on site

4.1. 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.

4.2. Annual service

During the Annual Service the recommendations in the FETA Guide to servicing and/or the manufacturer's instructions should be followed. When the extinguisher is emptied then media should be stored in an appropriate container before returning to the extinguisher. If the media is to be discarded it should be collected in secure packaging for removal and disposal.

Recovered fire extinguishing powders should **never** be re-used.

4.3. Discharge testing

If discharge testing is carried out on site care should be taken to ensure that the powder does not escape into the environment. If a discharge test has to be done then the extinguisher should be discharged into a large, preferably canvas, bag. After discharge the bag should be sealed to prevent any leakage of powder and the extinguisher valve assembly should be thoroughly cleaned.

If discharge testing is not done on site then the extinguisher should be taken away and replaced with another unit

5. Extinguishers off site/at service depot

5.1. Collection

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

- Collecting the powder in a secure container in the technicians vehicle before transferring to a larger container at the service depot
- Keeping the media in the extinguisher and replacing the old extinguisher with a replacement 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 replacement extinguisher. The old extinguishers or containers are then collected from the customer's site or service companies site by a licensed waste carrier
- Keeping the media in the extinguisher and replacing the old extinguisher with a replacement extinguisher. The old extinguishers are then collected from the customer's site by separate waste disposal company. **Note: This is common practice in other European countries**
- Certain types of powder are classed as hazardous waste, it is classed as an irritant and the concentration of MAP and Ammon Sul is more than 20%. Unless it is sent for further processing, disposal can only be via a carrier, licensed to carry and dispose of hazardous waste. In each case, a hazardous waste consignment note should be completed and retained for reporting to the EA Disposal.

5.2. Storage

Powder should be stored where possible in the original containers in dry, cool, well-ventilated place

Do not mix ABC and BC type powder.

6. Disposal of powder

Depending on the type of powder used different methods of disposal may be appropriate the main methods are given below, for more detailed information on the best method of disposal for each type of powder contact the powder manufacturer.

6.1. Landfill

As a biodegradable solid waste fire extinguisher powder in sealed containers can be disposed of in landfill sites.

6.2. Alternative methods of disposal

6.2.2. Agricultural

The silicon coating on powder needs to be considered when it is being offered for agricultural use and it may need to be removed before it can be used.

7. Sources of Further information

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

- **Department of Environment, Food and Rural Affairs**
<http://www.defra.gov.uk>
- **Environment Agency**
<http://www.environment-agency.gov.uk/>
- **Environment Agency NetRegs**
<http://www.netregs.gov.uk/>
- **Envirowise**
<http://www.envirowise.gov.uk/>
- **Scottish Regulations**
<http://www.scotland.gov.uk>
- **Scottish Environment Agency**
<http://www.sepa.org.uk>
- **Water Environment (Controlled Activities) (Scotland) Regulations 2005 Guidance document**
<http://www.sepa.org.uk/wfd/index.htm>
- **National Industry Symbiosis Programme**
<http://www.nisp.org.uk/>

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