



FIRE EXTINGUISHERS IN THE WORKPLACE

Induction and Training Guide for Cleaners

This manual is the property of: _____

Emergency: Nearest Hospital: _____

Nearest Medical Facility: _____

First Aid Box Located: _____

First Aider: _____

Supervisor: _____ Contact: _____

Area Manager: _____ Contact: _____

July 2012

CRUSE»»





Index

Introduction

Understanding Fire

Classes of Fire

Types of Extinguishers

Rules for Fighting Fires

How to Operate an Extinguisher

One Minute Quiz



Introduction

Legislation requires that all employees receive appropriate safety instruction and training in the use of first wave fire fighting equipment, i.e. fire extinguishers.

Therefore, any person likely to have to use, or any workplace where extinguishers are present, should be trained in the use and receive basic instruction in first wave fire fighting.

Delays due to hesitation or unsuccessful attempts to operate equipment can then be avoided.

Understanding Fire

In order to understand how fire extinguishers work, you first need to know a little bit about fire.

Fire is a chemical reaction involving the rapid oxidisation (burning) of a fuel.

Four things must be present in order to produce a fire;

- FUEL** - any combustible material – solid, liquid or gas
- OXYGEN** - sufficient oxygen must be present in the atmosphere surrounding the fuel
- HEAT** - sufficient to raise the material to its ignition temperature
- CHEMICAL** - EXOTHERMIC REACTION (FIRE)
- this reaction can occur when all three of the above elements are present

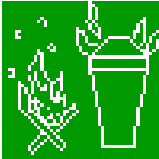
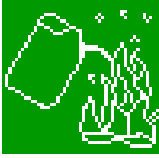

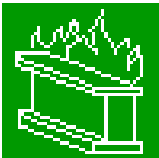

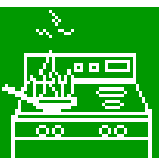
The important thing to remember is that if you take any of these four things away, you will not have a fire (or the fire will be extinguished).

Essentially, fire extinguishers put out the fire by taking away one or more elements.

Classes of Fire

Not all fires are the same. If you use the wrong type of fire extinguisher on the wrong class of fire, you can in effect 'make matters worse'.

It is very important that you understand all classes of fire.

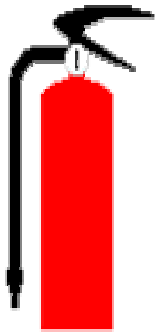
| FIRE CLASSES | |
|---|---|
|  | "CLASS A" ordinary combustible or fibrous materials such as wood, paper, coal, sugar, rubber, etc. |
|  | "CLASS B" flammable liquids such as petrol, oils, paints, etc. |
|  | "CLASS C" flammable gasses such as LPG, Acetylene, natural gas, etc. |
|  | "CLASS D" combustible metals such as sodium aluminium, magnesium, potassium, etc. |
|  | "CLASS E" fires involving electrical equipment. |
|  | "CLASS F" cooking oils or fat. |

Most fire extinguishers will have a pictorial label telling you which class of fire it is designed to fight.

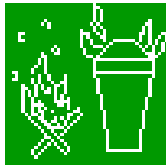
Types of Extinguishers

WATER EXTINGUISHER

These extinguishers are filled about two thirds of the way with ordinary tap water and then pressurised with air. When this type of extinguisher is activated, a stream of water is forced out.



WATER EXTINGUISHERS ARE IDENTIFIED BY A CONTINUOUS RED BODY (NO OTHER MARKINGS).



Water extinguishers are designed for Class A (wood, paper) type fires only.

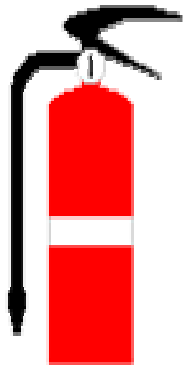
NEVER USE WATER TO EXTINGUISH FLAMMABLE LIQUID FIRES
you may spread the fire even further

NEVER USE WATER TO EXTINGUISH AN ELECTRICAL FIRE
water is a good conductor and there is a high risk that you may receive an electric shock if used on an electrical fire

Types of Extinguishers (cont.)

DRY CHEMICAL POWDER EXTINGUISHER

These extinguishers are filled with a fine powder and pressurised with nitrogen. When activated, they extinguish a fire by coating the fuel with a thin layer of powder which separates the fuel from the oxygen in the air.



DRY CHEMICAL POWDER EXTINGUISHERS ARE IDENTIFIED BY A WHITE BAND ON A RED BODY.

Dry chemical powder comes in two types:



A B (E)

indicating that they are designed to extinguish A, B and (E) class fires



B (E)

indicating that they are designed to extinguish B and (E) fires

Either one may be used for Class C fire after the sources of the gas are stopped and isolated.

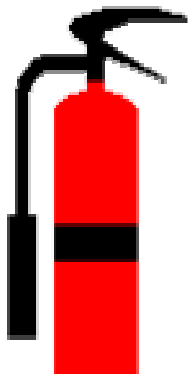
READ THE LABELS

you do not want to use a B(E) extinguisher on a Class A fire, mistaking it for a AB(E) extinguisher

Types of Extinguishers (cont.)

CARBON DIOXIDE EXTINGUISHER

These extinguishers are filled with non-flammable carbon dioxide gas under extreme pressure. They extinguish the fire by displacing the air, thus removing the oxygen.



CARBON DIOXIDE EXTINGUISHERS ARE IDENTIFIED BY A BLACK BAND ON A RED BODY AND A LARGE, WIDE NOZZLE ON THE END OF THE HOSE.

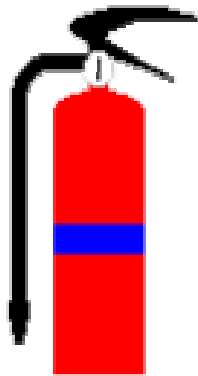


Co² are designed for Class B and E fires only

Types of Extinguishers (cont.)

FOAM EXTINGUISHER

These extinguishers contain an aqueous film, forming foam, and extinguishes the fire by creating a barrier between the fuel and oxygen. It also acts as a barrier to suppress the release of flammable vapours.



FOAM EXTINGUISHERS ARE IDENTIFIED BY A BLUE BAND ON A RED BODY.

(PRE 1999 THE EXTINGUISHER MAY BE A CONTINUOUS BLUE BODY).



Foam extinguishers are designed to be used on Class A & B type fires and to a limited extent, Class F (cooking oils and fats) type fires.

DANGEROUS IF USED ON ENERGISED ELECTRICAL EQUIPMENT

Rules for Fighting Fires

Fires can be very dangerous. You should always be sure that you will not place yourself or anyone else at risk if you decide to fight a fire.

Follow these rules to help you make a safe decision if you discover a fire:

- Assist any person in immediate danger, only if it can be accomplished without placing yourself at risk.
- Call the fire brigade by dialling 000 and activate the building alarm system (or designate someone else).
- Ensure everyone in the building is aware of the emergency and evacuate them as soon as possible.

Only after you have done all this (and the fire is small), may you attempt to fight the fire with an extinguisher.

If you decide to fight the fire:

ALWAYS:

- Operate the extinguisher briefly as you approach the fire to ensure it is working correctly. (Dry chemical extinguisher should be initially operated at the fire scene as the powder has a tendency to not allow the valve to fully close when released).
- Obtain assistance if possible, before you fight a fire.
- Ensure that there is a clear escape path behind you.

NEVER ATTEMPT TO FIGHT A FIRE IF:

- You do not know what is burning. (If you don't know what is burning, how do you know what extinguisher type to use)?
- The fire has started to spread quickly. (A portable extinguisher is for small fires. If the fire starts to spread quickly, evacuate the building immediately.
- You don't have adequate or appropriate equipment. (If you don't have the correct type or large enough extinguisher, it is best not to fight the fire).
- You might inhale toxic smoke. (If the fire is producing large amounts of smoke, it is best not to attempt to fight the fire.
- Your instinct tells you not to. (If you are in any doubt about the situation, evacuate immediately and wait for the Fire Services).

THE FINAL RULE

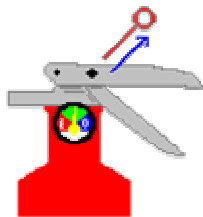
Always position yourself with an exit or means of escape before you attempt to use an extinguisher to put out a fire.

How to Operate an Extinguisher

The operation of an extinguisher is very simple, however in the heat of the moment, it is very easy to use if incorrectly or inefficiently.

Follow this easy acronym to remember how to use a fire extinguisher:

Pull - **A**im - **S**queeze - **S**weep



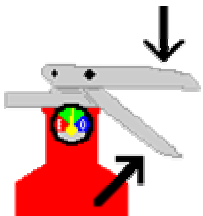
PULL the pin.

This will allow you to operate the extinguisher.



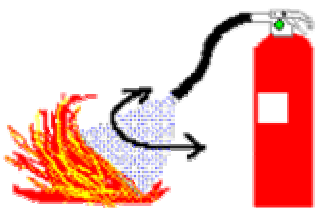
AIM at the base of the fire.

This is where the fuel is.



SQUEEZE the top handle or lever.

This releases the pressurized extinguishing agent.



SWEEP from side to side until the fire is completely extinguished.

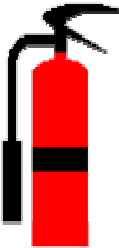
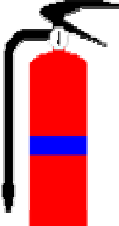
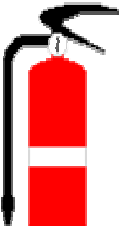
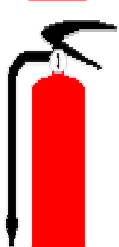
You should always test the extinguisher briefly, to ensure that it operates correctly, before taking it to the fire.

If you are in a position where there is a high fire risk (e.g. working with flammable materials or heat), then you should arrange to attend a hands-on fire extinguisher training program.

One Minute Quiz

Do this quick one minute quiz to check that you know which fire extinguisher is used for which class of fire.

DRAW A LINE, JOINING EACH FIRE EXTINGUISHER WITH ITS CORRESPONDING DEFINITION.

| | |
|---|--|
|  | DRY CHEMICAL POWDER EXTINGUISHERS A B (E) indicating that they are designed to extinguish A, B and (E) class fires. B (E) indicating that they are designed to extinguish B and (E) fires |
|  | WATER EXTINGUISHERS are designed for Class A (wood, paper) type fires only. |
|  | FOAM EXTINGUISHERS are designed to be used on Class A & B type fires and to a limited extend, Class F (cooking oils and fats) type fires. |
|  | CO² EXTINGUISHERS are designed for Class B and E fires only |