

Portable Fire Extinguishers

Understanding the Risk

Fire damage can destroy an organization with even small fires having the potential to significantly disrupt operations.

The appropriate use of a portable fire extinguisher can prevent a small fire in its early stages from developing into a major incident, protecting personnel, and limiting damage to property and disruption of business revenues.

It should be noted that the use of an incorrect fire extinguisher on some fire types or insufficient training can exacerbate a fire situation.

Loss Statistics

Recent studies in the US and UK have shown that the use of portable fire extinguishers in over 5400 incidents resulted in the successful extinguishment of the fire 80 – 94% of the time.

Fire Classification

To extinguish a fire effectively using a portable fire extinguisher, the proper type of extinguisher suitable for the fire class should be utilized. A description of the principal generic fire classifications are shown in the table below. Additional review of local country standards should be made to validate that these classifications apply locally.

Fire Class	Detail
A	Fire involving ordinary combustibles such as paper, wood, cloth o plastics
B	Fire involving liquids such as oils, fats, solvents, paints and flammable gases
C	Fire involving live electrical equipment.
D	Fire involving combustible metals such as magnesium, titanium, zirconium, sodium, lithium and potassium
K	Fire involving cooking equipment using combustible cooking materials such as vegetable/animal oils and fats

Use of an unsuitable extinguisher can result in aggravating the fire and possible harm to the user.

Types of Extinguisher

Particular types of extinguishers are best suited for use on certain classes of fire as indicated in the table below.

Extinguisher Type	Fire Class
Water	A
Foam	A, B
Dry Chemical	A, B
Wet Chemical	K
Carbon Dioxide	B, C
Halon 1211	A, B, C

It is important to match the type of extinguishing appliance with the local situation. Fuel types and ignition sources will have been identified as a part of the fire risk assessment and the extinguishing appliance should be chosen with this in mind. Extinguisher equipment should be certified by a recognized testing laboratory / agency.

Placement of Extinguishers

Extinguishers should be wall mounted on emergency exit routes at similar positions across similar floors, so that they can be easily accessed and operated without undue delay. As a general guideline, all areas within a building should be within 23 meters (75 feet) travel distance from a fire extinguisher with their positions marked for easy identification in an emergency.

Additionally, properly rated fire extinguishers should be located close to special hazards but not so close that if a fire occurs, access to the extinguisher becomes dangerous.

Further guidance on the size, type and placement of portable fire extinguishers should be sought from your local country fire extinguisher codes and standards or local fire brigade.

Training

Anyone seeking to use a portable fire extinguisher on a fire should receive training with at least annual retraining. Portable fire extinguisher training should include classroom instruction on the types of fires and extinguishers and effective use of the appliances to extinguish a fire. Additional training should be provided, where possible, involving the use of extinguishers on live or simulated fire scenarios. Proper fire safety precautions should be observed.

Training should also reinforce the message that fire fighting should only be undertaken if possible without putting anyone in danger.

Typical sources of fire extinguisher training can be your local fire brigade or fire extinguisher maintenance contractor.

With proper training, use of fire extinguisher on fire in its early stages will enable people to limit property damage and the potential of a large scale fire.

Maintenance and Servicing

A plan should be available showing the location of fire extinguishers so that during the annual maintenance inspection, it can be confirmed that all extinguishers have been inspected. Maintenance should be provided by a fire extinguishing certified or other competent contractor. There should be an extended service at least every five years. Detailed maintenance records should be kept to assure that all fire extinguishers receive proper maintenance and will operate properly in emergency.

Monthly inspections should ensure that extinguishers are unobstructed, clearly visible, are not visibly damaged, that tamper seals are in place and that pressure gauges are registering that the pressure is acceptable. A record of each inspection should be kept.

For further information contact your local AIG Global Property Engineer.

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