Fire Prevention Tips - Volume 3

Fire Marshal's Office of the Baltimore County Fire Department - April 2011

Portable Fire Extinguisher Part I

2007 NFPA 10 Standard for Portable Fire Extinguishers, 2009 NFPA 1 Fire Code Section: 13.6

Everybody has seen portable fire extinguishers, but not everyone understands how to use them. Having a working knowledge of fire extinguishers saves lives. Operators should be familiar with the extinguisher so it isn't necessary to read the directions during an emergency. Extinguishers should be available, fully charged and in working order. Remember that extinguishers need care and must be recharged after every use. Portable fire extinguishers are not designed for large, spreading fires and are only useful under certain conditions.

Fire extinguishers should be "listed" and "labeled" by an independent testing laboratory such as FM (Factory Mutual) or UL (Underwriters Laboratory). Many portable fire extinguishers are rated for use with more than one fire classification. The number ratings on a fire extinguisher indicate how large of a fire they can contain.

There are five basic classifications of fire extinguishers labeled with either letters or pictorial symbols that indicate the type of fire for which they are intended. **Refer to the chart below:**

A Ordinary Combustibles	**Class A** fires involve ordinary combustible materials, such as cloth, wood, paper, rubber, and many plastics.
B Flammable Liquids	**Class B** fires involve flammable and combustible liquids such as gasoline, alcohol, oil-based paints, and lacquers. *Do not attempt to extinguish a fire involving flammable gas unless there is reasonable assurance the source of fuel can be promptly shut off.*
C Electrical Equipment	**Class C** fires involve energized electrical equipment.
D Combustible Metals	**Class D** fires involve combustible metals, such as magnesium, titanium, and sodium. *Common extinguishing agents may react with combustible metal fires causing the severity of the fire to increase. The most common method for extinguishing a combustible metal fire is to cover the burning material with a dry powder, such as sand, that will not react with the material*
K Combustible Cooking	Class K fires involve vegetable oils, animal oils, or fats in cooking appliances. Extinguishers with a **K rating** are utilized in commercial cooking appliances similar to those found in restaurants and cafeterias. *K rated extinguishers are normally required where deep-fryers and/or griddles are utilized to prepare large quantities of food.*

At least one 2A rated fire extinguisher shall be provided for each 3,000 square feet of floor area, or fraction thereof for each floor level. Extinguishers shall be so located that they can be reached without traveling more than 75 feet in any direction. All extinguishers shall be mounted no lower than 4 inches off the floor and no higher than 5 ft off the floor. The fire extinguisher also shall be visible, accessible, unobstructed and inspected every 30 days to ensure that the extinguisher is fully charged and operable. The most common multi-purpose fire extinguisher found in occupancies is a 2A10BC.