

## **Fire Protection and Hazards, Fire Inspections, Code Compliance** **Michael Rose, July 2010**

Fire protection codes are a necessity that effects the retail store environment as well as the safety of all the individuals that frequent the location. In order to understand the basics of the fire code It is imperative that one understands the occupancy code as well as the contents of the property. This document will help you identify the materials and different classifications of combustibile materials as well as point you in the direction to begin to research the minimum standard or the appropriate code.

First there is a document standard or a library of document standards dealing with the subject so by no means is a brief going to cover all aspects or influences. The library that is a consolidated effort of industry leaders made up from the Fire Protection contractors that perform the work, Manufacturers of products, insurance industry professionals as well as building and fire code officials and experts.

This library of standards for the fire protection industry is called the NFPA documents . Each document is specific to each type or discipline of industry.

For example:

- 🔥 *NFPA 10 is portable fire extinguishers*
- 🔥 *NFPA 13 is the installation standard for sprinkler systems*
- 🔥 *NFPA 25 deals with sprinkler system inspection and maintenance*
- 🔥 *NFPA 72 catalogs the installation and maintenance standard of fire alarm systems*

There are hundreds of these type of standards that are specific to the type of business and the type of equipment being used. There are as well as many other documents that deal with other protection devices that you may or may not have at your location .. Things such as dampers on an hvac system, a fire hose on a stand pipe or perhaps the E (emergency and exit ) Lights that guide our path of egress out of the building in case of an emergency or power outage.

NFPA standards and documents are not the fire code or building code . Although many different versions for the standards exist . Each municipality has incorporated or adopted its own version of these standards. Some municipalities do not immediately adapt to the new standard or recommendations . Some municipalities are many years behind the current 2010 versions that are being published as I write this. Within the past few years NYC has abandoned codes and standards that were put in effect more then 25 years ago and have adopted a newer and more stringent code worthy of one of the greatest city's in the world. You need to do your research by contacting the local AHJ (authority having jurisdiction).

All hazards aren't the same. Hazards and classifications of materials that can potentially burn are classified by Underwriter laboratories ( UL) . UL is an independent testing agency that rates equipment for example portable fire extinguishers and its effectiveness on that material that can potentially start to combust. For your reference the following letter classifications are the standard classifications assembled and assigned by UL

## Fire Protection and Hazards, Fire Inspections, Code Compliance

Michael Rose, July 2010



Class A fire is one that is basic ordinary combustibles materials. Some examples are:

- Wood
- Cloth
- Sheet rock
- Paper
- Textiles
- Plastics



Class B fire is one that is of flammable liquids. Some examples are:

- Oils
- Chemicals
- Gas
- Turpentine
- Alcohol
- Diesel fuel



Class C fire is a fire that is electrically charged equipment. Some examples are:

- Fuse panel
- Piece of electronic machinery
- An air conditioning compressor
- Computer plugged into the wall
- Lighting fixture or outlet
- A lighting display



Class D fire is one of burning metals

- Magnesium
- Coppers
- Alloys
- Solders



Class K fire (also known as the commercial kitchen fire)

This classification is relatively new compared to the others. It is intended to work in conjunction with a standard by UL called UL 300. This standard was put in place as synthetic cooking oils took the place of natural animal fats and lard that in the "old" days was used to fry foods at restaurants.

The National Fire Protection Association, NFPA, a private non-profit organization, is the leading authoritative source of technical background, data, and consumer advice on fire protection, problems and prevention. Their web site is <http://www.nfpa.org>. The primary goal of NFPA is to reduce the worldwide burden of fire and other hazards on the quality of life by providing and advocating scientifically-based consensus codes and standards, research, training, and education.

NFPA has over 300 codes worldwide which are for sale through their website at [www.nfpa.org/catalog](http://www.nfpa.org/catalog). These codes cover every conceivable topic including basic fire safety, the National Electrical Code, and life safety. These codes are developed and updated through an open process, ensuring their broad acceptance.