

# Fire/Life Safety

- Means of Egress
- Fire Protection
- Hazardous Materials

# Fire/Life Safety

## Means of Egress

- Exits must be accessible at all times.
- Doors must be side-hinged and swing out.
- Exits must be clearly recognizable.
- Exits must discharge directly to an open space.
- Exits must be free of obstructions.
- Devices must not prevent the use of exits.

# Fire/Life Safety

## Means of Egress

- Signs must clearly identify exits or ways to exits.
- Signs must designate "Not An Exit" when confusing.
- Exit sign lettering must be 6" x 3/4".
- Exit signs must be illuminated.
- Exits must be readily visible.

# Fire/Life Safety

## Fire Protection

- Class A Fires: Ordinary combustibles such as wood and paper.
- Class B Fires: Flammable and combustible liquids and gases.
- Class C Fires: Energized electrical equipment.
- Class D Fires: Combustible metals.

# Fire/Life Safety

## Fire Protection

- Extinguishers must be mounted and identified so they are readily available.
- Only approved extinguishers can be used.
- Extinguishers must be fully charged.
- Extinguishers must be distributed as follows: A = 75 ft, B = 50 ft, C = 50/75, and D = 75 feet.

# Fire/Life Safety

## Fire Protection

- Extinguishers must be visually inspected monthly, maintained annually, and tested periodically.
- Employees must be trained annually in the use of extinguishers.
- TRUE or FALSE. All companies must have extinguishers and have trained employees use them.

# Fire/Life Safety

## Common Extinguishing Agents

- Water
- Carbon Dioxide
- Dry Chemical
- Multipurpose Dry Chemical
- Halon

# Fire/Life Safety

## Water

### Advantages

- Removes heat
- Inexpensive
- Effective on Class A fires
- Non-toxic
- Plentiful

### Disadvantages

- Conducts electricity
- May spread Class B fires
- Freezes
- May create run-off



# Fire/Life Safety

## Carbon Dioxide

### Advantages

- Reduces oxygen
- Effective on B and C fires
- No residue

### Disadvantages

- Requires a large volume.
- Toxic at  $> 4\%$
- Dissipates quickly
- Vapor density=1.5

# Fire/Life Safety

Dry Chemical (Sodium Bicarbonate)

## Advantages

- Interrupts reaction
- Effective on B and C fires
- Not considered toxic

## Disadvantages

- Leaves a residue
- Obscures vision
- Absorbs moisture
- May be irritating
- May cause splashes

# Fire/Life Safety

Multipurpose Dry Chemical  
(Ammonium Phosphate)

## Advantages

- Interrupts reaction
- Effective on A, B, and C fires
- Non-conductive

## Disadvantages

- Obscures vision
- May be irritating
- May cause splashes

# Fire/Life Safety

## Halon

### Advantages

- Interrupts reaction
- Effective on A, B, and C fires
- No residue
- No chilling effect on equipment.

### Disadvantages

- Toxic at > 10%
- Exposure effects unknown
- Decomposition in fire
- Vapor density > 5
- Restricted production

# Fire/Life Safety

## Hazardous Materials

- Not more than 60 gallons of Class I/II or 120 gallons of III may be in a cabinet.
- Oxygen must be separated from flammable and combustible materials.
- No smoking near flammables/combustibles.
- No combustibles near flammable liquid/gas.
- Containers of flammables/combustibles must be covered.

# Fire/Life Safety

## Hazardous Materials

- Flammable/combustible liquids in drums must have a self-closing valve.
- Class I liquids must be grounded and bonded.
- Spills must be cleaned-up promptly.
- Combustible waste materials must be disposed into covered metal containers and disposed of daily.