

FIRE EXTINGUISHER USE/FLAMMABLE AND COMBUSTIBLE SUBSTANCES

1. Task

Proper choice and use of fire extinguishers for construction.

2. Hazards

Fire hazard, smoke inhalation, chemical exposure.

3. Controls

Pre-Job Safety Assessment (PSA). CSA/ANSI approved fire extinguisher – ABC type, adequately trained workers, MSDS for ABC dry chemical fire extinguishers.

- ❖ Fire extinguishers must not be left free standing. They must be adequately secured.
- ❖ Know the three types of fires:
 - Class A-wood, paper, rags, rubbish, and other ordinary combustible material.
 - Class B-flammable liquids, oils and grease.
 - Class C-electrical fires.
- ❖ Because there are different types of fires a 4A40BC type fire extinguisher (that has been serviced within the last 12 months) is the best for use on the project.
- ❖ The 4A40BC fire extinguisher is made of carbon dioxide and dry chemical. This will fight most types of fires without the worry of electrical shock or reaction to water and chemicals.
- ❖ On a regular basis, ensure that a designated worker loosens the powder on the bottom of the extinguisher. This is done by inverting the fire extinguisher and taking a RUBBER mallet and hitting the bottom of the extinguisher.
- ❖ Extinguishers are to be inspected monthly and recorded on the tags provided.
- ❖ If you feel that you cannot control the fire within 30 seconds, LEAVE, and follow the emergency response procedure for the project. Give them the EXACT location, every second counts when fighting fires.
- ❖ After contacting the fire department, evacuate the area, NEVER at any time go back into the burning structure, you may become trapped and be severely injured or worse.
- ❖ Before you try to fight the fire, check the prevailing winds. NEVER, at any time stand down wind of the fire, this will cause you to breathe in the smoke and fumes from the fire.
- ❖ To fight the fire, you must use short bursts at the BASE of the fire, do not aim your extinguisher at the flames; all you are doing here is wasting your extinguisher. By aiming at the base, you are taking the oxygen away that the fire needs to burn.
- ❖ Fire prevention measures depend on identifying potential hazards and taking appropriate actions, including inspections. The following are some guidelines to prevent fires:
 - i. Ensure that your work area is clean. Do not leave excessive dust, wood, saw dust, etc. lying around, these are not only tripping hazards, they are fire hazards.
 - ii. Store all flammable liquids in approved containers and store these containers in approved lockups. All lockups must be clearly identifiable and warning of the potential hazards of fire. "DANGER, FLAMMABLES, NO OPEN FLAME".
 - iii. Keep all emergency exits clear of debris, NEVER store material in front of them.
 - iv. Ensure that all fire extinguishers are serviced within the last 12 months and they are in working order. If an extinguisher has been discharged, do not ignore it; report it to the Site Safety Coordinator or Superintendent.
- ❖ If a worker's clothing is contaminated with a flammable or combustible liquid, the worker must avoid activities that produce sparks or open flame, remove the contaminated clothing as soon as possible, and ensure the clothing is decontaminated as soon as possible.
- ❖ If a worker's skin becomes contaminated with a flammable or combustible liquid, the worker must wash the skin at the earliest possible time.
- ❖ A worker must not enter or work at a work area if more than 20 per cent of the lower explosive limit of a flammable or explosive substance is present in the atmosphere. A Hazard Assessment must be conducted including atmospheric testing results before a worker is exposed.

FLOOR OPENINGS/COVERS

1. Task

Preventing falling through or tripping into openings in work surfaces.

2. Hazards

Fall hazards, trip hazards, material falling from one level to another.

3. Controls

Pre-Job Safety Assessment (PSA). Securely covering and identifying openings, providing guardrails around openings.

- ❖ All openings in work surfaces must be securely and completely covered and properly identified, i.e. a distinctive circle with an X inside it.
- ❖ Ensure any hole larger than 4" diameter or 4"x4" rectangle shall be protected.
- ❖ Larger openings will be provided with a complete, secure guardrail around their perimeter.
- ❖ Covers must be constructed so that they can withstand a minimum of 2 times the loads to which they will be subjected. A minimum of 225 newtons (50 lb. per sq. ft.) "live load" is required.
- ❖ Openings such as elevator shafts and stairwells must be protected as per provincial regulations. In Alberta, all elevator shafts must be completely hoarded off. The hoarding must be adequately secured so no one can take the hoarding down easily, and the hoarding must be identified, i.e. "DANGER, OPEN SHAFT".
- ❖ Work platforms that cover elevator shafts must be constructed according to engineered drawings and inspected by a professional engineer or their competent designate prior to use.
- ❖ Where there is an opening in a floor, protected by guardrails, and a section of the guardrails has been moved to allow ladder access between levels, adequate signage must be in place identifying the fall hazard and signage must be on more than one side of the hazard.