Fire Protection



What is a fire safety plan?

A fire safety plan is a detailed document that covers all aspects of fire safety for a specific building or property. The plan will outline:

- A safe and orderly way for occupants to evacuate the building.
- Proper maintenance and housekeeping required to prevent fires.
- Methods of control that minimize the damage from fires when they do occur.

Fire safety plans are often required by your local Fire Code, especially for certain buildings and occupancy rates. Check with your jurisdiction, municipality, or local fire department for further information. Some municipalities and/or fire departments may prefer that a template or standard format be used by all businesses in their area to help when they have to respond to emergencies.

What should be included in the fire safety plan?

Plans should be specific to the property or business. Conducting an audit or review of the property or business will help identify factors that could affect fire safety. Items in this audit include site layout, points of entry/exit, roadways, use of the building, where and how items are stored, how items are used, water or fire department connections, alarm/sprinkler systems, and many other factors.

While specific requirements may vary by jurisdiction, in general, a fire safety plan should include:

- Emergency procedures to be used in case of fire, including how to:
- sound the alarm,
- notify the fire department, building or business officials, or other designated staff as specified in the plan (e.g., all telephones on site should have the emergency phone numbers listed and the address of the property posted close by),
- evacuate occupants (e.g., procedures occupants should follow when the fire alarm sounds),
- evacuate persons who may need assistance, and
- confine, control, and extinguish the fire where possible.
- How, and how often fire drills will be conducted.
- Information for any designated staff who have been given fire safety duties and responsibilities.
- Organization, education, and training for staff with fire safety duties.
- Information and actions to take to prevent or control fire hazards for that

building or business, where appropriate.
- Other staff education and training that may be necessary.
- Detailed maintenance procedures for fire protection systems.
- Diagrams and instructions about the type, location, and operation of any fire or emergency systems.
- Identification of alternative fire safety measures.
- Allow fire department access to the building and to the fire location within the building.

What can be included in typical fire safety plans for all employees?

Fire safety plans should provide employees or building occupants with the instructions they need to leave the building (or respond as appropriate) in the event of a fire. Examples of content for the plan may include instructions such as:

If you discover a fire:

- Leave the fire area immediately.
- Activate the fire alarm and/or alert other staff.
- If safe to do so, assist anyone in immediate danger.
- Close all doors behind you to confine the fire.
- Use exit stairwells to leave the building.

If you hear a fire alarm:

- Shutdown process/equipment (as preplanned, where applicable).
- Leave the building immediately.
- Close all doors behind you to confine the fire.
- Use exit stairwells to leave the building.
- If designated with fire emergency duties, carry out pre-planned procedures if safe to do so.

In the event of a fire:

- Do not use the elevator(s).
- Do not re-enter the building until the fire marshal or respective supervisory staff announces that it is safe to do so.

What are some examples of fire protection measures?

Items to be considered include:

Fire Protection Measures

Fire safety plan, and fire protection systems	Examples

Does the fire safety plan include, at minimum, the following items?	**• Procedures for evacuation and response • Building plans marked for fire exits, fire extinguishers, alarm points, smoke detectors, first aid boxes, main electrical panel, main water supply, evacuation routes, etc. • Methods required to prevent fires (e.g., storage of items, etc.)**
Has the fire safety plan been communicated to every employee or occupant?	**• Communicate fire safety plan and emergency response procedures to all employees and contractors. • Conduct fire drills at least twice a year (or as required by local jurisdiction) • Observe the response to fire drills, and adjust the plan as necessary to ensure its effectiveness**
What information is needed when calling for emergency services?	**• Post all emergency numbers and instructions close to telephones • Post the location/address of the building, with any specific instructions that may be needed by the responders**
Are designated employees given the education and training required to perform assigned duties?	**• For example: provide education and training to all designated employees on the type and correct use of fire extinguishers. • For example: fire wardens must be educated and trained in how to clear an area quickly and other related duties.**
Are appropriate inspections conducted?	**• Inspect all the fire extinguishers, fire alarm system, emergency lighting system, sprinkler system, and other fire protection monthly or as per the Fire Code and other applicable legislation**
Fire doors/exits, Lighting	
Are emergency exits and fire extinguishers accessible?	**• All aisles, emergency exits, fire extinguishers, etc. must be kept clear of product or storage objects, fork trucks, etc. at all times • Exit routes from buildings must be clear of all obstructions**

Are fire doors installed and maintained properly?	**• Each building must have at least two means of escape separate from each other • Fire doors must not be left open unless equipped with self-closing mechanisms. Fire doors must be kept free of obstructions that would prevent the door from closing • Exit doors must open in an emergency (not permanently locked or chained closed) • Exit doors must be properly marked with signs indicating they are exits from the building**
Is appropriate emergency lighting in place?	**• Install and maintain adequate emergency lighting to cover stair cases, washrooms, meeting rooms, parking lots, exits, etc.**
Fire Extinguishers	
Are fire extinguishers clearly marked?	**• Mark all fire extinguishers clearly with the class of fire for which it is appropriate**
Are fire extinguishers properly installed?	**• Install fire extinguishers as per the Fire Code • Must be kept free of obstructions for easy access**
Are fire extinguishers inspected regularly?	**• Inspect portable fire extinguishers monthly or as required by your local jurisdiction For more information about portable fire extinguishers, please refer to the “Fire Extinguishers – Portable” OSH Answers document.**
Are smoke and fire alarms in place?	**• Provide and maintain adequate fire alarms and smoke alarms according to the Fire Code • Test periodically (monthly) or as according to your jurisdiction • If smoke alarm is battery operated, do not remove batteries unless they are replaced immediately with fresh batteries**

What is an example of fire hazard audit/checklist?

The examples outlined below do not list all the possible items that may be a fire hazard. The best checklist for your workplace is one that has been developed for your

specific needs. You can add or delete information in this checklist to match your workplace.

Use the checklist and answer yes or no to the questions. Follow up any “no” answers with corrective action. Possible controls as suggestions for corrective actions are also given.

Fire Hazard Audit/Checklist

Hazard Question	Possible Controls
Ignition Sources	
Has the workplace taken fire safety precautions for operations that have exposed flames?	**• Isolate operations • Do not store any combustible items near these operations • Clean equipment and work areas before and after each use so that they are free from dusts and oil particles**
Are all sources of ignition identified?	**• Identify all sources of ignition (e.g., sparks, welding, smoking, hot plates, pilot lights, space heaters, boilers, furnace, etc.) • Make sure combustible or flammable items are not stored near ignition sources • Ensure appropriate fire walls are erected around hot equipment when required • Check ventilation rates for equipment and repair where appropriate**
Are operations involving hot work such as welding, grinding or cooking considered as potential source of fire hazard?	**• Make sure all the equipment and accessories used in hot work are in good working condition • Separate hot work areas from other operations • Keep combustible or flammable materials away from hot work areas • Develop safe work procedures for operations involving hot work • Use a “fire watch” attendant as necessary • Use appropriate personal protective equipment such as face shield, respirators, eye protection, etc.**

Has the use of a space heater been identified as a fire hazard?	**• Perform a Heating, Ventilation and Air Conditioning (HVAC) audit to ensure the unit is functioning correctly and the space is being heated properly** **• If a space heater is still required, develop guidelines about their safe use** **• Include storage guidelines for combustible items within a certain distance of a heat source that complies with local Building and Fire Codes**
Electrical	
Is all wiring installed properly and appropriate to the current or voltage ratings?	**• Make sure that all electrical systems are installed and function according to any Codes that may apply** **• Identify and replace wiring that is not appropriate for the loads they are carrying** **• Repair or replace any exposed wiring** **• Do not overload electrical equipment or electrical outlets** **• Replace extension cords that are being used for long term purposes with permanent wiring.** **• Develop a lock-out/tagout program for any work done on energized systems** **• Educate and train employees on electrical safety** **• Provide appropriate personal protective equipment (PPE) where a risk of arc-flash or arc-blast is present**
Chemical Storage, Handling, Distribution, Dispensing	
Is an inventory of all flammable and combustible materials available?	**• Identify all flammable and combustible materials. Examples include: paints, degreasers, parts washers solvent, alcohol based cleaners, aerosols, etc.** **• Maintain an inventory with the quantity, location of use, and storage** **• Include all quantities such as small pails or cans**

Are precautions for flammable and combustible materials taken?	**• Do not use combustible or flammable materials for cleaning purposes where possible (e.g., do not use gasoline and other flammable solvents)** **• Do not heat cleaning agents, or use on hot surfaces or near open flames** **• Areas where solvents are used must be well ventilated** **• Place rags in designated covered metal containers until the rags can be properly cleaned or disposed** **• Remove clothing that becomes contaminated with a cleaning agent as soon as possible and clean as directed by the manufacturer of the product**
Are precautions taken when dispensing containers of flammable liquids that generate static or sparks?	**• Containers or process equipment must be properly bonded and grounded to a receiving container before dispensing, transfer or collection of flammable liquids**

Are flammable and combustible materials stored and used in a safe manner?	**• Do not allow hot work, flames, or smoking in flammable or combustible material storage areas** **• Do not store other combustible materials near flammable storage areas or lockers** **• Separate flammable liquid transfer areas from other operations by distance or by fire walls with the proper fire resistance** **• Make sure there are routes of exit for the rooms in which flammable or combustible materials are stored or handled** **• Exits must be located so that occupants can exit quickly and not be trapped in the event of fire** **• Use explosion-resistant light fixtures in storage rooms** **• Store flammable liquids in approved flammable storage lockers, or containers** **• Bulk drums of flammable liquids must be grounded and bonded during dispensing** **• Large bulk storage of gasoline, diesel, or oil must be kept in above ground tanks** **• When not in use, keep flammable liquids in covered containers** **• Clean the spills promptly** **• Keep combustible waste material and residues to a minimum, store in covered metal receptacles, and dispose daily** **• Make sure appropriate fire extinguishers are mounted within the required distance for both indoor and outdoor areas containing flammable liquids. Check your local Fire Code for specifications** **• Provide appropriate ventilation, including continuous mechanical exhaust ventilation system for every indoor storage room**

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