

Fuel Storage Safety

Fire Safety

The use of proper fire suppression tools are essential around fuel storage.

Any location used to store fuel should have proper fire extinguishers on hand and readily accessible. There are different classes of fire extinguishers used for different purposes.

Fire Extinguisher Classes Per Region:

American	European	UK	Australian/Asian	Fuel/Heat Source
Class A	Class A	Class A	Class A	Ordinary combustibles
Class B	Class B	Class B	Class B	Flammable liquids
	Class C	Class C	Class C	Flammable gases
Class C	Unclassified	Unclassified	Class E	Electrical equipment
Class D	Class D	Class D	Class D	Combustible metals
Class K	Class F	Class F	Class F	Kitchen Grade (Cooking oil or

The only extinguisher type that should be used on fires caused by liquid and gaseous fuel are Class B fire extinguishers. Class B extinguishers work by emitting CO2, which “suffocates” the flames. Class B extinguishers technically emit a toxic compound, so persons using the extinguishers should know how to do so safely, and only operate them in the proper manner.

Large foam based extinguishers can be used for large quantities of fuel storage, but they must be rated for liquid fires.

NEVER attempt to put out a liquid or gas fire using water:

- Water may evaporate almost instantly in a fuel fire and give the flame more oxygen to expand.
- Flammable liquids tend to be lighter than water, so running water may actually spread flaming liquid around.

Fire extinguishers must be routinely checked and refilled/repressurized. Extinguishers should be checked once a month, recharged once every 6 months, or according to the manufacturer recommendations.

Class B Fire Extinguishers

Fuel storage areas will also benefit from the use of “sand buckets” or other form of fire suppression system using sand or dirt. Buckets full of sand should be placed on the ground near storage, and can be tossed onto flames to prevent spread. Sand buckets should be brightly coloured and clearly labelled so they are not accidentally removed or mistaken for trash.

Example Fire Bucket:

Depending on the size and complexity of the operation, fire or smoke detectors and alarms

may be required. Local regulations may also require alarm systems around storage. Consult local authorities to understand the prevailing laws surrounding fire prevention and suppression.

Other general fire safety rules:

- NEVER conduct welding or other “hot work” near fuel storage facilities.
- Make sure all fire exits are not locked from the inside, and that all emergency evacuation areas are free from debris.
- Avoid at all costs storing reactive chemicals, medical items, food or anything else near fuel for whatever reason.

Marking

Fuel storage areas should be well marked

Hazard signs should be written in plane the local language, but also display locally recognizable symbols. Signage should clearly indicate that smoking and other activities that might start a fire are prohibited.

Many countries and municipalities have special requirements for labeling and marking stationary fuel storage locations. Where required, signage and placards must follow local regulations. Consult with local authorities about what signage or placarding might be required in the country of operation.

Example Regulation Signs:

Spill Response

In the event of a spill or leaking container, the supervisor of the facility should be notified. The person discovering the spill and the site supervisor should record information on the spill (when it occurred, why it occurred, what was spilled, volume spilled, personnel involved, etc.), and keep on file at the storage location.

In the event of spills of flammable or combustible fuel, the following steps are strongly suggested:

- Inform all persons in the immediate area to evacuate, except those involved in the clean-up process.
- Notify the safety and security focal point.
- Eliminate all ignition sources, including static electricity, electrical switches, running motors, and exposed wiring.
- Increase ventilation and exhaust fumes to the outdoors.
- Put on the appropriate protective equipment.
- Confine the spill by blocking it. This is done by using the absorbent material in the spill kit. Prevent the spill from entering drains or sewer system.
- Cover the spill with absorbent materials and safely and properly dispose of used absorbents.
- Safely dispose of contaminated equipment including personal protective equipment.
- Seal and label all containers of disposed items as hazardous waste.
- Store waste in a safe spot in or near the storage facility, ideally outside, until pickup by a licensed hazardous waste disposal company can be arranged.

- For a major spill, or one that cannot be contained, the area should be fully evacuated.

Spill Clean-up

Materials used to support the clean-up spills should be readily available in all storage locations where fuel might be stored. These clean-up materials might include items such as the following:

- Oil absorbent pads.
- Brooms and squeegees.
- Large plastic covered trash bins.
- Nitrile gloves and latex gloves.
- Leather gloves.
- Boots.
- Respiratory masks.
- Salvage drums and containment pallets.
- Sandbags or bags of other absorbent materials.
- Danger tape.
- Safety cones.
- Helmet/ "hard hat".
- Face shield.
- Chemical resistant aprons.
- Emergency response guidelines.